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CHARLES F. MARVIN, Chief

MONTHLY WEATHER REVIEW

SUPPLEMENT No. 15

AEROLOGY No. 10

FREE-AIR DATA AT BROKEN ARROW, OKLA., DREXEL, NEBR., ELLENDALE, N. DAK., GROESBECK, TEX., LEESBURG, GA., AND ROYAL CENTER, IND., AEROLOGICAL STATIONS, OCTOBER TO DECEMBER, 1918, INCLUSIVE.

By The Aerological Division, Willis Ray Gregg, In Charge.

THE GROESBECK AEROLOGICAL STATION.

By Thomas J. Chancellor, Meteorologist.

THE LEESBURG AEROLOGICAL STATION.

By Frank T. Cole, Observer

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SUPPLEMENTS TO THE MONTHLY WEATHER REVIEW.

During the summer of 1913 the issue of the system of publications of the Department of Agriculture was changed and simplified so as to eliminate numerous independent series of Bureau bulletins. In accordance with this plan, among other changes, the series of quarto bulletins—lettered from A to Z—and the octavo bulletins—numbered from 1 to 44—formerly issued by the U. S. Weather Bureau have come to their close.

Contributions to meteorology such as would have formed bulletins are authorized to appear hereafter as Supplements of the MONTHLY WEATHER REVIEW. (Memorandum from the office of the Assistant Secretary, May 18, 1914.)

These Supplements comprise those more voluminous studies which appear to form permanent contributions to the science of meteorology and of weather forecasting, as well as important communications relating to the other activities of the U. S. Weather Bureau. They appear at irregular intervals as occasion may demand, and contain approximately 100 pages of text, charts, and other illustrations. Subscribers to the MONTHLY WEATHER REVIEW receive the SUPPLEMENTS without extra charge. Copies may be procured at the prices indicated below by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C.

SUPPLEMENTS PUBLISHED.

No. 1. Types of storms of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1914. 37 p. 114 ch. 4°. Price 25 cents. (W. B. No. 538.)

No. 2. I. Calendar of the leafing, etc., of the common trees of the eastern United States. By G. N. Lamb. 19 p. 4 figs. II. Phenological dates, etc., recorded by T. Mikesell at Wauseon, Ohio. By J. Warren Smith. 73 p. 2 figs. Washington, 1915. 4°. Price 25 cents. (W. B. No. 558.)

No. 3. (*Aerology No. 1.*) Sounding balloon ascensions at Fort Omaha, Nebr., May 8, 1915, etc. By W. R. Blair and others. 67 p. 23 figs. Washington, 1916. 4°. Price 25 cents. (W. B. No. 592.)

No. 4. Types of anticyclones of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1917. 25 p. 7 figs. 73 ch. 4°. Price 25 cents. (W. B. No. 600.)

No. 5. (*Aerology No. 2.*) Free-air data at Drexel Aerological Station: January, February, and March, 1916. By W. R. Blair and others. Washington, 1917. 59 p. 6 figs. 4°. Price 25 cents. (W. B. No. 603.)

No. 6. Relative humidities and vapor pressures over the United States, including a discussion of data from recording hair hygrometers for a period of about 5 years. By P. C. Day. Washington, 1917. 61 p. 7 figs. 34 charts. 4°. Price 25 cents. (W. B. No. 609.)

No. 7. (*Aerology No. 3.*) Free-air data at Drexel Aerological Station: April, May, and June, 1916. By W. R. Blair and others. Washington, 1917. 51 p. 4 figs. 4°. Price 25 cents. (W. B. No. 619.)

No. 8. (*Aerology No. 4.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1916. By W. R. Gregg and others. Washington, 1918. 111 p. 12 figs. 4°. Price 25 cents. (W. B. No. 642.)

No. 9. Periodical events and Natural Law as guides to agricultural research and practice. By A. D. Hopkins. Washington, 1918. 42 p. 22 figs. 4°. Price 25 cents. (W. B. No. 643.)

No. 10. (*Aerology No. 5.*) Free-air data at Drexel Aerological Station: January, February, March, April, May, and June, 1917. By W. R. Gregg and others. Washington, 1918. 101 p. 11 figs. 4°. Price 25 cents. (W. B. No. 651.)

No. 11. (*Aerology No. 6.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1917. By W. R. Gregg and others. Washington, 1918. 108 p. 11 figs. 4°. Price 25 cents. (W. B. No. 658.)

No. 12. (*Aerology No. 7.*) Free-air data at Drexel and the Ellendale Aerological Stations: January, February, and March, 1918. By W. R. Gregg and others; Cold winter of 1917–18. By W. R. Gregg. Description of the Ellendale Aerological Station. By V. E. Jakl. Washington, 1918. 82 p. 10 figs. 4°. Price 25 cents. (W. B. No. 660.)

No. 13. (*Aerology No. 8.*) I. Free-air data at Drexel and Ellendale Aerological Stations: April, May, and June, 1918. By W. R. Gregg and others. II. Notes on kite flying. By V. E. Jakl. Washington, 1918. 81 p. 1 fig. 4°. Price 25 cents. (W. B. No. 663.)

No. 14. (*Aerology No. 9.*) I. Free-air data at Broken Arrow, Drexel, Ellendale, and Royal Center Aerological Stations, July, August, and September, 1918. By W. R. Gregg and others. II. Broken Arrow Aerological Station. By John A. Reihle. III. Royal Center Aerological Station. By Homer W. Ball, Washington, 1919. 132 p. 22 figs. 4°. Price 25 cents. (W. B. No. 672.)

FREE-AIR DATA AT BROKEN ARROW, OKLA.; DREXEL, NEBR.; ELLENDALE, N. DAK.; GROESBECK, TEX.; LEESBURG, GA.; AND ROYAL CENTER, IND., AEROLOGICAL STATIONS, OCTOBER TO DECEMBER, 1918, INCLUSIVE.

By the Aerological Division, WILLIS RAY GREGG, Meteorologist, in charge.

GENERAL STATEMENT.

During the three months, October to December, 1918, inclusive, kite flights were made on all but 12 days at Drexel and 9 days at Ellendale. Eight of the failures at Drexel were due to light winds and four to rainy or stormy conditions, while all the failures at Ellendale were due to light winds. The greater number of failures at Broken Arrow and Royal Center was due in part to insufficient instrumental and power equipment, as well as unfavorable weather conditions. The relatively low altitudes attained at Broken Arrow were occasioned by delay in the receipt of proper power equipment. Free-air observations were begun at Groesbeck, Tex.,[1] on September 25, three flights being made in September. Failures in daily flights thereafter were due mainly to light winds. Practice kite flights were made when practicable during this period at Leesburg, Ga.,[1] but owing to the wet, marshy condition of the kite field daily flights could not be made, and owing to the lack of motor power, thus necessitating the reeling in by hand, the altitudes reached were not great enough to justify publication of the records obtained.

The number of flights, their mean altitudes, and the highest altitudes attained in each month are given in Table 1.

TABLE 1.—*Distribution, mean altitudes, and highest altitudes of kite flights at Broken Arrow, Okla.; Drexel, Nebr.; Ellendale, N. Dak.; Groesbeck, Tex.; and Royal Center, Ind., for the period October to December, 1918, inclusive.*

	October.	November.	December.	Total.
Broken Arrow, Okla.:				
Number of flights	16	20	17	53
Mean altitude, meters	1,345	1,515	1,166	1,427
Highest altitude, meters	2,425	3,247	1,659	.....
Date	30	14	14	.....
Drexel, Nebr.:				
Number of flights	33	40	38	111
Mean altitude, meters	3,063	2,827	2,682	2,847
Highest altitude, meters	4,577	4,879	4,122	.....
Date	31	2	10	.....
Ellendale, N. Dak.:				
Number of flights	47	38	38	123
Mean altitude, meters	2,922	2,987	2,832	2,914
Highest altitude, meters	5,319	4,511	5,667	.....
Date	11	1	27	.....
Groesbeck, Tex.:				
Number of flights	24	32	33	89
Mean altitude, meters	2,600	2,241	2,618	2,476
Highest altitude, meters	6,245	5,040	4,920	.....
Date	14	19	2	.....
Royal Center, Ind.:				
Number of flights	25	30	27	82
Mean altitude, meters	2,998	2,352	2,410	2,576
Highest altitude, meters	4,383	4,328	3,552	.....
Date	17	6	18	.....

[1] For description of these stations see page 10 and page 12, respectively, this Supplement.

SPECIAL NOTES ON KITE FLIGHTS.

Drexel, Nebr.: October 14, 1918.—"A diurnal series was begun on October 14, but was abandoned after the fourth flight, owing to the wind attaining such velocity as to tear the kite sails, thus causing the wire to sink and become fouled with the trees."—*V. E. J.*

October 21, 1918.—"A diurnal series was started on October 21, and four excellent flights were obtained. During the fourth flight rain set in and continued practically all night and the following day. This series should prove interesting as showing the development of rain in advance of an Alberta LOW—a condition not ordinarily indicating precipitation."—*V. E. J.*

October 25, 1918.—"An interesting flight, to about 3,600 meters altitude, was made on October 25. In this flight the first ice of the season was brought down on kites and wire. The flight shows the development of cloudiness in two distinct strata of air that led to a period of sleet, snow, and rain, beginning shortly after the flight and continuing for about two and a half days."—*V. E. J.*

October 30, 1918.—"A diurnal series begun on October 30 was interrupted with the third flight, when rain began, finally turning to snow."—*V. E. J.*

Groesbeck, Tex.: November 25, 26, and 27, 1918.—"The three flights, on November 25, 26, and 27, were made during rainy conditions, and consequently were of low altitudes, the kites being weighted down with water or ice."—*T. J. C.*

December 3, 1918.—"A diurnal series was begun on December 3, but ended with the third flight owing to the winds failing."—*T. J. C.*

Royal Center, Ind.: October 4, 1918.—"A diurnal series was begun on October 4, but during the third flight the two head kites, with the instrument, broke away. Immediate search was begun, but the kites and instrument were not recovered until late on the afternoon of October 9, when they were found near Argas, Ind., 65 kilometers NNE. of the station. To our knowledge only slight damage was done to property by the kites. Kite flights were resumed on October 10."—*H. W. B.*

November 6, 1918.—"A diurnal series was started on November 6, but during the third flight a kite caught on the wire, and when reeled in pulled the wire into some trees, where it was broken. The kites were found flying the next day, November 7, and recovered."—*H. W. B.*

FREE-AIR TEMPERATURES.

Table 2 contains mean monthly temperatures at different levels, as observed at Broken Arrow, Drexel, Ellendale, Groesbeck, and Royal Center during the period October to December, 1918, inclusive; also, for purposes of comparison, the three-year means for Drexel, for October, and four-years means for November and December, and the five-year means for Mount Weather, Va.

Temperature means were somewhat above the average at Drexel for October and December, and somewhat below the average for November.

TABLE 2.—*Mean monthly temperatures at Broken Arrow, Drexel, Ellendale, Groesbeck, and Royal Center for the period October to December, 1918, inclusive; also, three-year mean at Drexel for October, four-year means at Drexel for November and December, and five-year means for the entire period at Mount Weather, Va.*

October.

Altitude, sea level.	Broken Arrow, 1918.	Drexel.		Ellendale, 1918.	Groesbeck, 1918.	Royal Center, 1918.	Mount Weather, 5-year mean.
		1918.	3-year mean.				
Meters.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
Surface[a]	[b]18.3				[c]19.0	[f]13.8	
250	− 0.2				18.2	13.7	
Surface[a]		[c]13.9	11.1	[d]8.0			
500	− 1.6	13.5	10.6	7.8	16.6	12.4	[g]11.7
750	− 0.7	13.3	9.5	6.9	15.0	11.2	10.3
1,000	− 1.3	12.9	8.5	6.5	13.4	10.3	9.0
1,250	− 1.6	12.3	7.7	6.2	12.9	9.3	8.0
1,500	− 1.1	11.1	6.8	5.5	12.2	8.4	7.1
1,750	− 1.0	9.7	5.9	4.3	10.9	7.4	6.3
2,000	− 0.8	8.5	4.8	2.9	9.7	6.4	5.5
2,250	− 2.1	7.0	3.6	1.6	8.4	5.4	4.6
2,500		5.4	2.2	0.2	7.0	4.3	3.5
2,750		4.0	0.9	− 1.2	5.6	3.3	2.3
3,000		2.6	− 0.5	− 2.4	4.1	2.2	1.0
3,250		1.4	− 1.7	− 3.8	2.6	1.3	− 0.4
3,500		0.3	− 3.0	− 5.3	1.1	0.3	− 1.9
3,750		− 0.9	− 4.2	− 6.6	− 0.3	− 0.5	− 3.4
4,000		− 2.0	− 5.5	− 7.9	− 1.6	− 1.3	− 4.7
4,250		− 2.9	− 6.6	− 9.7	− 3.2	− 2.5	− 6.1
4,500		− 3.8	− 7.4	−11.9	− 4.8		− 7.5
4,750			− 8.8	−14.1	− 6.1		− 9.1
5,000				−16.2	− 7.4		
5,250				−18.2	− 9.0		
5,500					− 9.7		
5,750					−12.4		
6,000					−14.5		
6,250					−16.5		

November.

Surface[a]	[g]9.1				[f]12.3	[k]5.9	
250	9.0				11.7	5.7	
Surface[a]		[h]3.4	5.3	[i]− 1.2			
500	7.8	3.3	5.3	− 1.2	10.3	3.9	[g]5.1
750	7.0	2.6	4.9	− 1.2	9.2	2.5	3.9
1,000	5.9	2.2	4.6	− 0.9	8.4	1.5	2.8
1,250	4.7	1.6	4.1	− 1.0	7.7	0.6	1.7
1,500	3.7	1.1	3.5	− 1.6	7.1	− 0.2	0.7
1,750	2.6	0.5	2.7	− 2.3	6.0	− 0.9	− 0.2
2,000	1.6	− 0.4	1.6	− 3.2	4.8	− 1.6	− 0.9
2,250	0.6	− 1.3	0.5	− 4.3	3.6	− 2.6	− 1.8
2,500	− 0.1	− 2.5	− 0.8	− 5.6	2.6	− 3.5	− 2.9
2,750	− 0.8	− 3.9	− 2.2	− 6.8	1.6	− 4.4	− 4.2
3,000	− 1.9	− 5.4	− 3.7	− 8.1	0.3	− 5.0	− 5.5
3,250	− 4.3	− 6.7	− 5.1	− 9.5	− 1.2	− 6.0	− 6.8
3,500		− 7.9	− 6.5	−11.1	− 2.8	− 7.1	− 8.3
3,750		− 9.6	− 8.0	−12.8	− 4.4	− 8.8	− 9.9
4,000		−11.2	− 9.4	−14.3	− 5.8	−10.7	−11.4
4,250		−12.8	−10.7	−15.4	− 7.8	−12.7	−12.9
4,500		−14.4	−12.1	−16.6	− 8.8		−14.5
4,750		−16.2	−13.7		−10.4		−16.1
5,000			−15.0		−12.1		−17.5
5,250			−16.1				−18.7
5,500			−17.2				−20.1
5,750			−18.3				−21.5
6,000							
6,250							

[a] Broken Arrow, 233 meters; Drexel, 396 meters; Ellendale, 444 meters; Groesbeck, 141 meters; Royal Center, 225 meters.
[b] Actual 24-hour mean temperature, 17.8 °C.
[c] Actual 24-hour mean temperature, 13.2 °C.
[d] Actual 24-hour mean temperature, 8.7 °C.
[e] Actual 24-hour mean temperature, 20.3 °C.
[f] Actual 24-hour mean temperature, 12.5 °C.
[g] Actual 24-hour mean temperature, 8.9 °C.
[h] Actual 24-hour mean temperature, 4.1 °C.
[i] Actual 24-hour mean temperature, −1.4 °C.
[j] Actual 24-hour mean temperature, 12.4 °C.
[k] Actual 24-hour mean temperature, 5.0 °C.
[q] At surface, 526 meters above sea level.

TABLE 2.—*Mean monthly temperatures at Broken Arrow, Drexel, Ellendale, Groesbeck, and Royal Center for the period October to December, 1918, inclusive, etc.*—Continued.

December.

Altitude, sea level.	Broken Arrow, 1918.	Drexel.		Ellendale, 1918.	Groesbeck, 1918.	Royal Center, 1918.	Mount Weather, 5-year mean.
		1918.	3-year mean.				
Meters.	°C.	°C.	°C.	°C.	°C.	°C.	°C.
Surface[a]	[f]7.6				[o]11.3	[p]1.7	
250	7.5				11.2	1.6	
Surface[a]		[m]− 0.2	− 4.0	[n]− 6.4			
500	6.5	0.4	− 3.8	− 6.2	10.4	0.9	[q]− 0.3
750	6.1	0.3	− 3.6	− 5.0	9.5	0.7	− 1.2
1,000	5.9	0.3	− 3.0	− 4.0	8.8	0.6	− 1.9
1,250	5.8	0.1	− 2.6	− 3.6	8.2	0.1	− 2.3
1,500	4.0	− 0.9	− 2.9	− 4.1	7.6	− 0.9	− 2.6
1,750		− 1.9	− 3.5	− 4.8	7.0	− 2.2	− 3.0
2,000		− 3.0	− 4.2	− 5.9	6.1	− 3.1	− 3.7
2,250		− 4.3	− 5.2	− 7.2	5.1	− 4.3	− 4.6
2,500		− 5.5	− 6.3	− 8.7	4.0	− 5.5	− 5.6
2,750		− 6.6	− 7.5	−10.3	3.0	− 6.6	− 6.8
3,000		− 7.9	− 8.7	−11.9	2.0	− 8.3	− 8.1
3,250		− 9.2	− 9.9	−13.5	1.0	− 9.7	− 9.5
3,500		−10.4	−11.1	−14.9	− 0.3	−11.0	−10.9
3,750		−11.8	−12.3	−16.3	− 1.6		−12.3
4,000		−13.0	−13.7	−17.8	− 3.0		−13.6
4,250			−15.1	−19.1	− 4.4		−15.1
4,500			−16.4	−20.7	− 6.0		−16.7
4,750			−17.5	−22.2	− 7.0		−18.2
5,000			−18.9	−23.9			−19.4
5,250				−25.7			
5,500				−27.3			
5,750							
6,000							
6,250							

[a] Broken Arrow, 233 meters; Drexel, 396 meters; Ellendale, 444 meters; Groesbeck, 141 meters; Royal Center, 225 meters.
[f] Actual 24-hour mean temperature, 6.0 °C.
[m] Actual 24-hour mean temperature, 0.4 °C.
[n] Actual 24-hour mean temperature, −7.3 °C.
[o] Actual 24-hour mean temperature, 10.6 °C.
[p] Actual 24-hour mean temperature, 2.3 °C.
[q] At surface, 526 meters above sea level.

DIURNAL SERIES OBSERVATIONS.

During the three months three successful series of observations of diurnal variations were made at Drexel, five at Ellendale, three at Groesbeck, and three at Royal Center.

Three unsuccessful attempts were made at Drexel during October, but were abandoned owing to stormy conditions. One unsuccessful attempt at Groesbeck in December was abandoned on account of light winds. Two unsuccessful attempts at Royal Center resulted in breakaways. These unsuccessful series are discussed elsewhere in this paper under "Special notes on kite flights." Owing to lack of suitable power for flying at night no series of observations of diurnal variations was made at Broken Arrow.

The number of observations and the average altitude attained in each series are shown in Table 3.

TABLE 3.—*Number of observations, duration, and average altitudes reached in diurnal series at Drexel, Nebr.; Ellendale, N. Dak.; Groesbeck, Tex.; and Royal Center, Ind., October to December, 1918, inclusive.*

Station.	Dates.	Number of flights.	Duration.	Mean altitude.
			Hours.	*Meters.*
Drexel	Nov. 1–2	8	34	3,032
	Nov. 11–12	7	26	3,428
	Dec. 10–11	8	33	3,264
Ellendale	Oct. 17–18	9	33	2,965
	Oct. 30–31	8	28	2,521
	Nov. 12–13	6	33	3,475
	Nov. 29–30	9	31	3,472
	Dec. 7–8	8	35	2,877
Groesbeck	Oct. 28–29	8	35	2,659
	Nov. 16–17	9	33	2,577
	Dec. 5–6	7	32	3,324
Royal Center	Oct. 15–16	7	27	3,379
	Nov. 12–13	6	18	2,572
	Dec. 18–19	6	26	2,886

The duration of each series and the temperature observed in each are shown on isothermal charts, figures 1 to 14. Weather conditions at each station for the three months may be found in Tables 5 to 20.

GENERAL PRESSURE DISTRIBUTION AND CIRCULATION OF LOCAL WINDS DURING THE DIURNAL SERIES.

Drexel, Nebr.: November 1–2.—An extensive area of high barometric pressure central over northern Louisiana and southern Arkansas (1,028 mb.) and overlying the Central Valley from the Rockies to the Atlantic coast on the morning of the 1st, moved eastward with undiminished intensity and was central over northern Kentucky (1,030 mb.) on the morning of the 2d, followed by a small area of barometric depression (1,013 mb.) which appeared over central Colorado on the evening of the 1st, and moved southeast to northern Texas (1,013 mb.) by morning of the 2d. By afternoon of the 2d a trough of relatively low pressure had developed, extending from northern Texas to Minnesota (1,013 mb.).

Under these conditions surface winds were southerly throughout the flight, backing from SSW. on the morning of the 1st to SSE. by late afternoon and evening of the same day, and veering back to S. and SSW. by afternoon of the 2d. The winds aloft were generally westerly, backing from NW. on the morning of the 1st to SSW. and S. by morning of the 2d, and veering back to SSW. and W. by afternoon of the 2d, the westerly component increasing with altitude.

Fair weather prevailed throughout the series.

November 11–12.—On the morning of the 11th an area of high pressure (1,034 mb.) central over northern New York and the upper St. Lawrence Valley, extended southwest over the entire country east of the Mississippi, while a well-developed LOW, central over Saskatchewan (996 mb.), extended southward over the Rocky Mountain highlands to Colorado. By evening of the 1st the Saskatchewan LOW had moved eastward to Manitoba, with a shallow trough extending southwestward to western Kansas, and followed by an area of high pressure central over northwestern Wyoming (1,029 mb.). By morning of the 12th this high pressure area had extended its influence over the Central Plains States.

Under these conditions surface winds veered from S. and SSW. on the morning of the 11th to NNW. and N. by midnight and remained so to the end of the series. The winds aloft veered from SSW. to NNW. and N. by 10 p. m. of the 1st, with a NNE. component at altitudes of about 700 to 1,000 meters, and remained so to the end of the series. The series ended when the surface winds became too light to permit the launching of a kite.

Fair weather prevailed during the series.

December 10–11.—A trough of low pressure central over southern Missouri (1,007 mb.) on the morning of the 10th extended northwestward to Saskatchewan, separating two areas of high pressure, one central over Ontario (1,034 mb.), the other over Idaho (1,026 mb.).

By evening of the 10th Nebraska was completely under the influence of the western HIGH, which moved rapidly southeastward and overspread the central and southern Plains States by morning of the 11th (1,025 mb.).

Surface winds were westerly, backing from NW. to SW. by midnight, veering back to W. by morning of the 11th, and backing again to SW. and S. by the end of the series. Winds aloft backed from NW. to WNW. by midnight, and to W. and SW. by the end of the series.

Generally clear skies prevailed after mid-afternoon of the 10th till toward the end of the series, on the afternoon of the 11th.

Ellendale, N. Dak.: October 17–18.—A Saskatchewan HIGH (1,026 mb.) dominated the weather conditions over the Dakotas on the morning of the 17th, while a LOW of moderate intensity (1,009 mb.) was central over Wisconsin. By evening of the 17th the Wisconsin LOW had moved eastward to Lake Ontario with undiminished intensity, while the Saskatchewan HIGH moved eastward over Manitoba with slightly increased intensity, and by morning of the 18th had reached the Upper Lake region (1,032 mb.), followed by an incipient LOW now central over Alberta (1,009 mb.).

These conditions gave generally cloudy skies with surface winds N. to NE., veering to E. by midnight, to SE. by morning of the 18th, and S. by noon of the 18th and thereafter. The winds aloft veered from N. at the beginning of the series to SW. by morning of the 18th, and backed to S. by the end of the series.

October 30–31.—During this series a trough of low pressure central over the Lake region and Ohio Valley (1,002 mb.) moved eastward to the lower St. Lawrence Valley with increasing intensity (998 mb.), followed by an extensive area of moderately high pressure central over northwestern Wyoming (1,028 mb.) on the morning of the 30th, which advanced to western Kansas and Nebraska by morning of the 31st with uniform intensity. Another LOW appeared over British Columbia on the evening of the 30th, and was central over Alberta (1,009 mb.) on the morning of the 31st.

Winds, both at the surface and aloft, veered from NNW. to N., dying out in the forenoon of the 31st so that the series was abandoned.

The only days with sufficient wind during the month being cloudy, this series did not average very high altitudes, owing to the accumulation of ice on the kite wire.

November 12–13.—During the entire series high pressure predominated. On the morning of the 12th a HIGH was central over northwestern Wyoming (1,033 mb.) and overlay the entire Rocky Mountain Highland region, while a LOW of moderate intensity (1,010 mb.) was central over Lake Superior. This LOW advanced slightly eastward, but remained practically uniform in intensity, while the Wyoming HIGH advanced rapidly southeastward, with diminishing intensity (1,025 mb.) and over-

spread the Plains States and the lower Mississippi Valley on the morning of the 13th.

Winds, both at the surface and aloft, were from W. and NW. all day of the 12th, but veered suddenly to NE. near the surface at about 1 a. m. on the 13th. The series was temporarily abandoned with the fifth flight owing to the winds dying out. A flight was impossible till the afternoon of the 13th, when one of about 3,250 meters was made. During the last flight surface winds backed from SSE. to ESE., while winds at higher altitudes veered with altitude from SSE. at 750 meters to WNW. at 3,250 meters, and increased in strength.

Generally clear skies prevailed throughout the series, and moderately high altitudes were reached.

November 29–30.—During this series relatively high barometric pressure prevailed over the West, increasing in intensity from 1,034 mb. over Wyoming on the morning of the 29th to 1,036 mb. over New Mexico and Nevada by morning of the 30th. An extensive and well-developed LOW central over Ontario (992 mb.) overlay the northeastern quadrant of the country on the morning of the 29th, but had moved out to the St. Lawrence Gulf by evening.

Winds aloft were generally northwesterly throughout the flight, while surface winds showed a stronger westerly component, backing from NW. to SW. during the greater portion of the flight, but veering back to NE. on the afternoon of the 30th.

Considerable cloudiness prevailed during the greater portion of this series.

December 7–8.—During this series barometric gradients were relatively weak over the interior of the country. On the morning of the 7th a HIGH, just passing out to sea, was central over the Virginia Capes (1,030 mb.) and extended from New England along the Atlantic and Gulf Coastal regions to New Mexico. This ridge of high pressure moved out to sea by evening of the 7th, and was followed by a low ridge of relatively high pressure (1,013 mb.) central over North Dakota on the morning of the 8th, which moved northeast during the day. A LOW (989 mb.) appeared over Alberta on the morning of the 7th, and by evening had advanced east to Saskatchewan (994 mb.) while another LOW (1,001 mb.) appeared over the Great Basin. On the morning of the 8th the Alberta LOW was central over northwestern Ontario (996 mb.), while the Great Basin LOW had advanced to eastern Colorado. At the same time a LOW of great energy (975 mb.) appeared over western British Columbia. By evening of the 8th the Colorado LOW had moved to southwestern Nebraska with increased intensity (996 mb.) while relatively high pressure (1,016 mb.) prevailed over Manitoba.

Winds, both at the surface and aloft, were westerly, veering from SW. on the morning of the 7th to W. and WNW. by evening, and continuing so, the veering being more rapid with altitude, till the end of the seventh flight, 6:12 a. m. of the 8th, when they became so light that the series was temporarily abandoned. The eighth and last flight of the series was made during the late afternoon of the 8th, the winds having greatly increased in strength with their veering to the E. and ENE.

Practically cloudless skies prevailed throughout this series.

Groesbeck, Tex.: October 28–29.—On the morning of the 28th a LOW of great energy (986 mb.) was central over northern Wisconsin, with two secondary LOWS (992 mb.) over Saskatchewan and (993 mb.) over eastern Colorado, while relatively high pressure prevailed along the Atlantic and Gulf coasts. By evening the high pressure ridge had moved out to sea, leaving a trough of relatively low pressure extending from Lake Superior to Texas, with barometric minima (991 mb.) over Lake Superior and (999 mb.) over Oklahoma. This trough of low pressure prevailed during the 29th, though with somewhat weakened intensity and a slight eastward advance, while HIGHS of moderate intensity (1,024 mb.) overlay the Pacific slope and the North Atlantic.

Surface winds were southerly and those aloft southwesterly till the morning of the 29th, when both surface winds and those aloft suddenly veered to NNW. and remained so throughout the remainder of the series.

Generally cloudless skies prevailed.

November 16–17.—On the morning of the 16th a well-defined area of low pressure, central over eastern Kansas (994 mb.), overlay the Plains States from Manitoba to the west Gulf coast, with relatively high pressure over New England (1,026 mb.) and along the Central Pacific coast (1,023 mb.). These conditions produced strong barometric gradients in an east-westerly direction over the interior of the country. The evening weather chart showed no appreciable change in the general distribution of pressure, except that the Kansas LOW had moved northeastward to central Iowa with slightly diminished intensity, while the Pacific HIGH had advanced to Idaho with increased intensity (1,027 mb.). By evening of the 17th the Iowa LOW had advanced to the Michigan Peninsula with slightly increased intensity (995 mb.), while the western HIGH, now central over northwestern Wyoming, had increased to 1,034 mb.

Winds veered from WSW. on the 16th to W. and WNW. by midnight and became NW. by noon of the 17th, and so continued to the end of the series. Winds aloft were generally strong, thus limiting the flights to comparatively low altitudes.

Generally clear skies prevailed throughout the series.

December 5–6.—On the morning of the 5th a ring of high pressure extended along the Gulf coast from northern Florida (1,027 mb.) to western Colorado (1,030 mb.), with a well-defined LOW central over Minnesota (1,006 mb.), overlying the upper and middle Missippi Valley. By evening the Minnesota LOW had moved eastward to northern Michigan with increased intensity (1,000 mb.) and was followed, in turn, by an Alberta HIGH central

now over North Dakota (1,026 mb.). Two areas of barometric maxima, over Florida (1,027 mb.) and Colorado (1,027 mb.), were separated by a shallow trough of LOW pressure extending from the central LOW over Michigan southwestward over Oklahoma and central Texas (1,019 mb.). By morning of the 6th the Michigan LOW had moved to the New England coast with increased intensity (998 mb.), while the Dakota HIGH had advanced southeastward to northern Illinois (1,027 mb.), the Florida and Colorado HIGHS having remained stationary. During the day of the 6th the movement of the northern HIGH was rapid and almost due east, with no appreciable change in intensity, while the southern HIGHS remained stationary and decreased slightly in intensity.

Winds at the surface and aloft were southwesterly throughout the series, the westerly component increasing with altitude.

Generally cloudless skies prevailed during the series.

Royal Center, Ind.: October 15–16.—This series was begun immediately after the passing of a HIGH, which was central over the upper Ohio Valley (1,030 mb.) on the morning of the 15th. A secondary LOW (1,013 mb.) over southern Minnesota had practically disappeared by night, while the Ohio Valley HIGH had reached the Middle Atlantic States. On the morning of the 16th a flat low-pressure area had developed over western South Dakota (1,011 mb.) while relatively high pressure prevailed over the eastern half of the country, with barometric maxima (1,025 mb.) over upper Michigan and (1,029 mb.) over western Virginia.

Winds were southwesterly at and near the surface but westerly with increasing altitude. At the termination of the seventh flight the surface wind became too light to sustain the kites.

Clear skies prevailed throughout the series.

November 12–13.—This series was begun with low pressure (1,010 mb.) over the upper Lake region and HIGHS over the Northeastern States (1,032 mb.) and the Rocky Mountain highlands (1,033 mb.). Barometric gradients over the Central Valleys were weak. By night the northern LOW had moved to western Ontario (1,011 mb.) and the western HIGH had advanced to Kansas (1,027 mb.). By morning of the 13th the HIGH had overspread the middle and southern Mississippi Valley with a crest of 1,025 mb. over western Tennessee and Kentucky, while the northern LOW remained practically stationary with undiminishing intensity. During the 13th, however, the HIGH extended its influence over the entire Ohio Valley and Lake plains, thus forcing the Canadian LOW eastward to the upper St. Lawrence Valley.

Surface winds veered from southwesterly to westerly while the winds aloft showed a stronger westerly and northwesterly component throughout the series. The series was temporarily interrupted during the second flight owing to a breakaway on the afternoon of the 12th.

Partly cloudy weather on the 12th gave way to cloudless skies late in the afternoon and on the following day.

December 18–19.—A HIGH of great magnitude, central over the St. Lawrence Valley (1,043 mb.), overspread the entire eastern half of the country on the morning of the 18th, with a secondary HIGH (1,034 mb.) over western Minnesota. A trough of relatively low pressure (1,021 mb.) extended northward from the west Gulf coast to southern Kansas. By evening of the 18th the trough of low pressure had extended itself farther northward, with a center of weak intensity (1,022 mb.) over western Iowa, while the St. Lawrence HIGH still held firm with undiminished intensity over the entire East. No material changes in pressure distribution took place on the 19th.

Surface winds veered from E. to SE. while those aloft veered from ESE. to S. near the surface, and from S. to SW. at higher altitudes, thus showing a stronger southerly component with increasing altitude. The series was abandoned at the end of the sixth flight, the winds having become so light as to render high altitudes impossible of attainment.

Low clouds at the beginning of the series gave way to a diminishing amount of higher clouds by noon of the 18th.

GRAVITY POTENTIAL.

Table 4 contains values of gravity potential for standard gravity, 980.665 dynes, and for each of the six Aerological Stations. The method used in determining these values is discussed in Supplement No. 12 (Aerology No. 7), pages 8–9. The following equation shows the relation between gravity potential and the factors which determine its value:

$$Gv = \frac{g}{1000} z - .0000001543\ z^2, \quad (1)$$

in which Gv = gravity potential in gravs (10^5 ergs),
g = force of gravity on a gram, in dynes, and
z = altitude in meters above some fixed point (sea level in this case).

The "sea-level" values of gravity at all stations have been computed by introducing into formula (2) on page 8 of Supplement No. 12 the proper values of surface gravity, g_s, and altitude of station, z_s, thus:

$$g = g_s + .0003086\ z_s.$$

The values of g_s and z_s for each of the stations are as follows:

	g_s (dynes).	z_s (meters)
Broken Arrow	979.742	233
Drexel	980.174	396
Ellendale	980.382	444
Groesbeck	979.400	141
Leesburg	979.453	85
Royal Center	980.187	225

TABLE 4.—*Values of gravity potential, gv, for standard gravity, and for Broken Arrow, Okla.; Drexel, Nebr.; Ellendale, N. Dak.; Groesbeck, Tex.; Leesburg, Ga.; and Royal Center, Ind.*

Standard gravity, g=980.665.

Altitude, sea level.	0	100	200	300	400	500	600	700	800	900
Meters.	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*
0	0	98	196	294	392	490	588	686	784	882
1,000	981	1,079	1,177	1,275	1,373	1,471	1,569	1,667	1,765	1,863
2,000	1,961	2,059	2,157	2,255	2,353	2,451	2,549	2,647	2,745	2,843
3,000	2,941	3,039	3,137	3,235	3,332	3,430	3,528	3,626	3,724	3,822
4,000	3,920	4,018	4,116	4,214	4,312	4,410	4,508	4,606	4,704	4,802
5,000	4,899	4,997	5,095	5,193	5,291	5,389	5,487	5,585	5,683	5,781
6,000	5,878	5,976	6,074	6,172	6,270	6,368	6,466	6,564	6,661	6,759

Broken Arrow, Okla., g=979.514.

0	0	98	196	294	392	490	588	686	784	882
1,000	980	1,078	1,176	1,273	1,371	1,469	1,567	1,665	1,763	1,861
2,000	1,959	2,057	2,155	2,253	2,351	2,449	2,546	2,644	2,742	2,840
3,000	2,938	3,036	3,134	3,232	3,330	3,427	3,525	3,623	3,721	3,819
4,000	3,917	4,015	4,112	4,210	4,308	4,406	4,504	4,602	4,700	4,797
5,000	4,895	4,993	5,091	5,189	5,286	5,384	5,482	5,580	5,678	5,776
6,000	5,873	5,971	6,069	6,167	6,264	6,362	6,460	6,558	6,656	6,753

Drexel, Nebr., g=980.296.

0	0	98	196	294	392	490	588	686	784	882
1,000	980	1,078	1,176	1,274	1,372	1,470	1,568	1,666	1,764	1,862
2,000	1,960	2,058	2,156	2,254	2,352	2,450	2,548	2,646	2,744	2,842
3,000	2,940	3,037	3,135	3,233	3,331	3,429	3,527	3,625	3,723	3,821
4,000	3,919	4,017	4,115	4,212	4,310	4,408	4,506	4,604	4,702	4,800
5,000	4,898	4,996	5,093	5,191	5,289	5,387	5,485	5,583	5,681	5,778
6,000	5,876	5,974	6,072	6,170	6,268	6,365	6,463	6,561	6,659	6,757

Ellendale, N. Dak., g=980.719.

0	0	98	196	294	392	490	588	686	784	883
1,000	981	1,079	1,177	1,275	1,373	1,471	1,569	1,667	1,765	1,863
2,000	1,961	2,059	2,157	2,255	2,353	2,451	2,549	2,647	2,745	2,843
3,000	2,941	3,039	3,137	3,235	3,333	3,431	3,529	3,627	3,724	3,822
4,000	3,920	4,018	4,116	4,214	4,312	4,410	4,508	4,606	4,704	4,802
5,000	4,900	4,998	5,096	5,193	5,291	5,389	5,487	5,585	5,683	5,781
6,000	5,879	5,977	6,075	6,172	6,270	6,368	6,466	6,564	6,662	6,760

Groesbeck, Tex., g=979.444.

0	0	98	196	294	392	490	588	686	783	881
1,000	979	1,077	1,175	1,273	1,371	1,469	1,567	1,665	1,762	1,860
2,000	1,958	2,056	2,154	2,252	2,350	2,448	2,546	2,643	2,741	2,839
3,000	2,937	3,035	3,133	3,230	3,328	3,426	3,524	3,622	3,720	3,817
4,000	3,915	4,013	4,111	4,209	4,307	4,404	4,502	4,600	4,698	4,796
5,000	4,893	4,991	5,089	5,187	5,284	5,382	5,480	5,578	5,676	5,773
6,000	5,871	5,969	6,067	6,164	6,262	6,360	6,458	6,555	6,653	6,751

TABLE 4.—*Values of gravity potential, gv, for standard gravity, and for broken Arrow, Okla.; Drexel, Nebr.; Ellendale, N. Dak.; Groesbeck, Tex.; Leesburg, Ga.; and Royal Center, Ind*—Continued.

Leesburg, Ga., g=979.479.

Altitude, sea level.	0	100	200	300	400	500	600	700	800	900
Meters.	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*	*gv.*
0	0	98	196	294	392	490	588	686	783	881
1,000	979	1,077	1,175	1,273	1,371	1,469	1,567	1,665	1,763	1,860
2,000	1,958	2,056	2,154	2,252	2,350	2,448	2,546	2,643	2,741	2,839
3,000	2,937	3,035	3,133	3,231	3,328	3,426	3,524	3,622	3,720	3,818
4,000	3,915	4,013	4,111	4,209	4,307	4,405	4,502	4,600	4,698	4,796
5,000	4,894	4,991	5,089	5,187	5,285	5,382	5,480	5,578	5,676	5,774
6,000	5,871	5,969	6,067	6,165	6,262	6,360	6,458	6,556	6,653	6,751

Royal Center, Ind., g=980.257.

0	0	98	196	294	392	490	588	686	784	882
1,000	980	1,078	1,176	1,274	1,372	1,470	1,568	1,666	1,764	1,862
2,000	1,960	2,058	2,156	2,254	2,352	2,450	2,548	2,646	2,744	2,841
3,000	2,939	3,037	3,135	3,233	3,331	3,429	3,527	3,625	3,723	3,821
4,000	3,919	4,016	4,114	4,212	4,310	4,408	4,506	4,604	4,702	4,800
5,000	4,897	4,995	5,093	5,191	5,289	5,387	5,485	5,582	5,680	5,778
6,000	5,876	5,974	6,072	6,169	6,267	6,365	6,463	6,561	6,659	6,756

Proportional parts.

97

	0	1	2	3	4	5	6	7	8	9
0	0	1	2	3	4	5	6	7	8	9
10	10	11	12	13	14	15	16	16	17	18
20	19	20	21	22	23	24	25	26	27	28
30	29	30	31	32	33	34	35	36	37	38
40	39	40	41	42	43	44	45	46	47	48
50	48	49	50	51	52	53	54	55	56	57
60	58	59	60	61	62	63	64	65	66	67
70	68	69	70	71	72	73	74	75	76	77
80	78	79	80	81	81	82	83	84	85	86
90	87	88	89	90	91	92	93	94	95	96

98

0	0	1	2	3	4	5	6	7	8	9
10	10	11	12	13	14	15	16	17	18	19
20	20	21	22	23	24	24	25	26	27	28
30	29	30	31	32	33	34	35	36	37	38
40	39	40	41	42	43	44	45	46	47	48
50	49	50	51	52	53	54	55	56	57	58
60	59	60	61	62	63	64	65	66	67	68
70	69	70	71	72	73	74	74	75	76	77
80	78	79	80	81	82	83	84	85	86	87
90	88	89	90	91	92	93	94	95	96	97

THE GROESBECK AEROLOGICAL STATION.

By THOMAS J. CHANCELLOR, Meteorologist.

The Groesbeck Aerological Station is located on the Anglin farm, about 1½ kilometers southeast of Groesbeck, Limestone County, Tex. Groesbeck is in east-central Texas on the Dallas-Houston line of the Houston & Texas Central Railway, 154 kilometers south-southeast of Dallas, 274 kilometers northwest of Houston, and about 60 kilometers east of Waco, and has a population of about 1,700. Its latitude is 31° 30′ N., longitude 96° 30′ W., and elevation above sea level 141 meters. The town site lies on both sides of the railroad in nearly equal proportions and has an area of approximately 1 square kilometer. The station site is about 500 meters southeast of the eastern corporate limits of the town, just south of the Oletha Road, which is an extension of the main business street of the town, and consists of a square tract of 40 acres of land. The office building, garage, instrument tower, etc., are situated in the northwest corner of the tract nearest to the town and only a few meters from the road, and are therefore easily accessible from the town. Figure 15, drawn approximately to scale, shows the relative positions of the various buildings and apparatus.

The country surrounding the station is practically level and comparatively free from timber. To the north, west, and south the land is mostly cultivated prairie, with occasional clumps of mesquite and thin fringes of "cross timbers" along the streams. To the east the land was originally timbered, but has been cleared largely for cultivation.

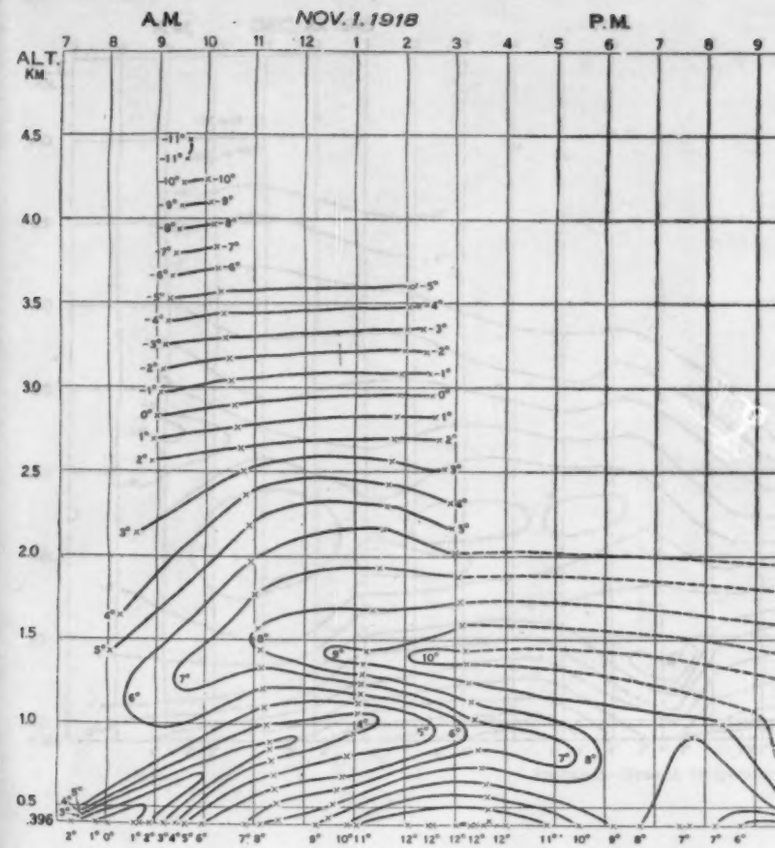


FIGURE 1.—Free-air temperatur

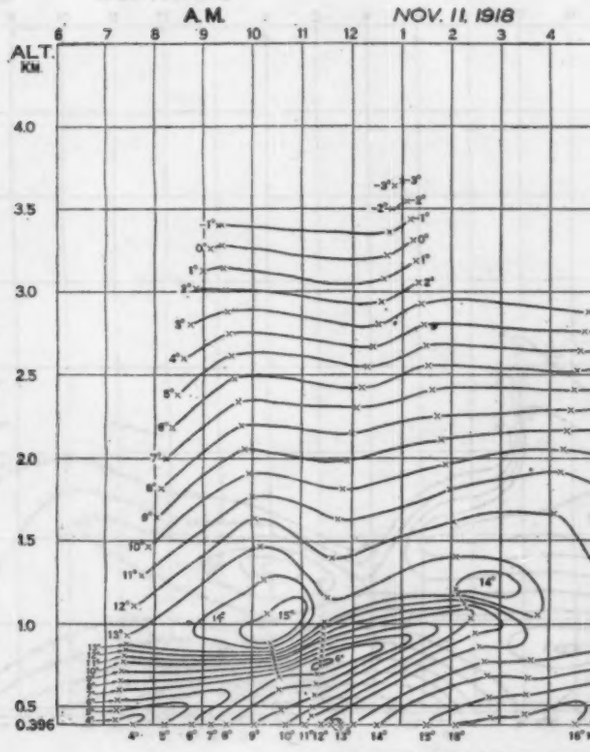
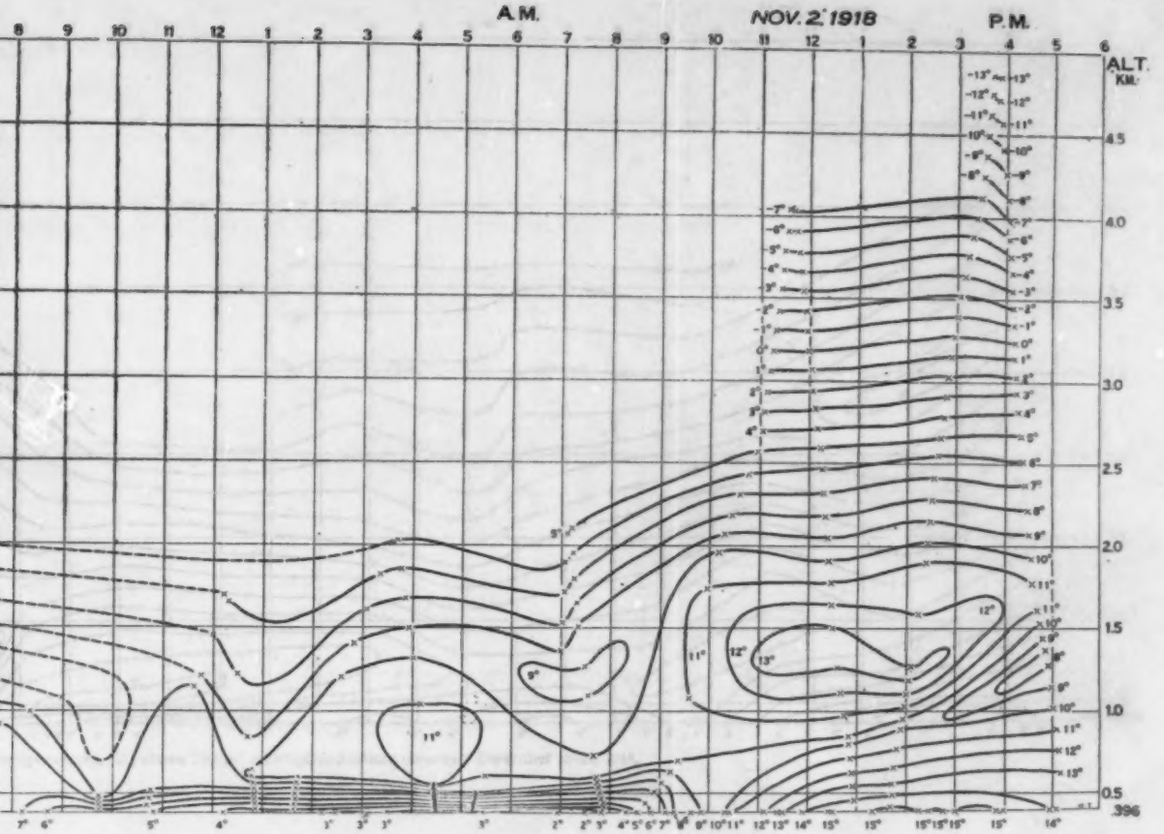
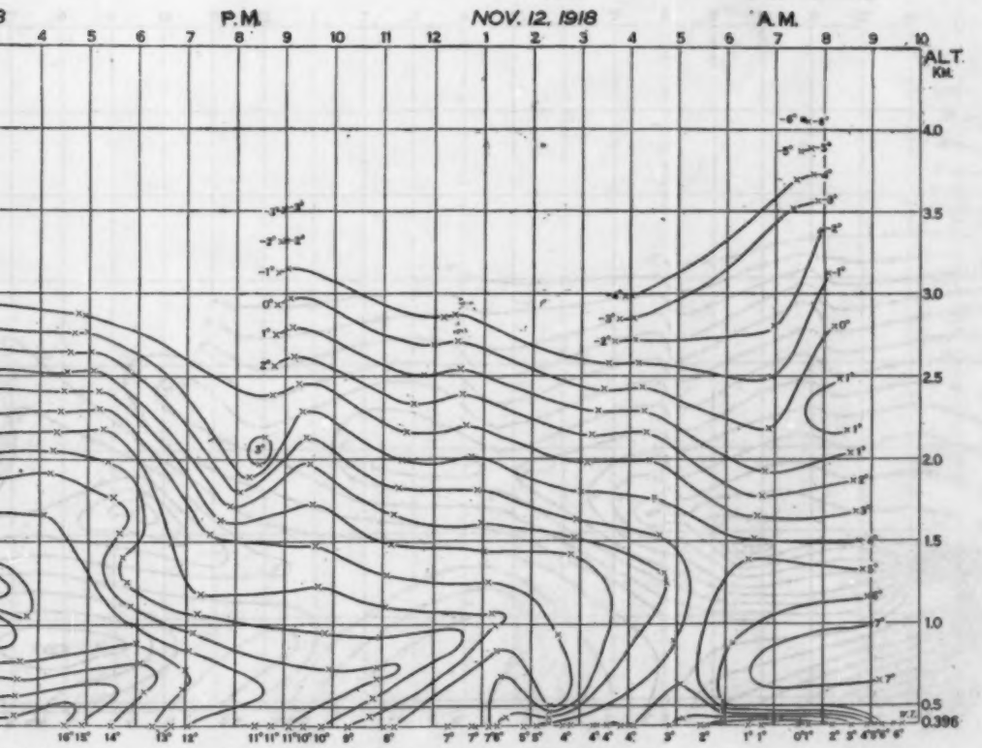


FIGURE 2.—Free-air temperature

[Facing page 10.]



Temperatures, °C., above Drexel Aerological Station; observed November 1–2, 1918.



Temperatures, °C., above Drexel Aerological Station; observed November 11–12, 1918.

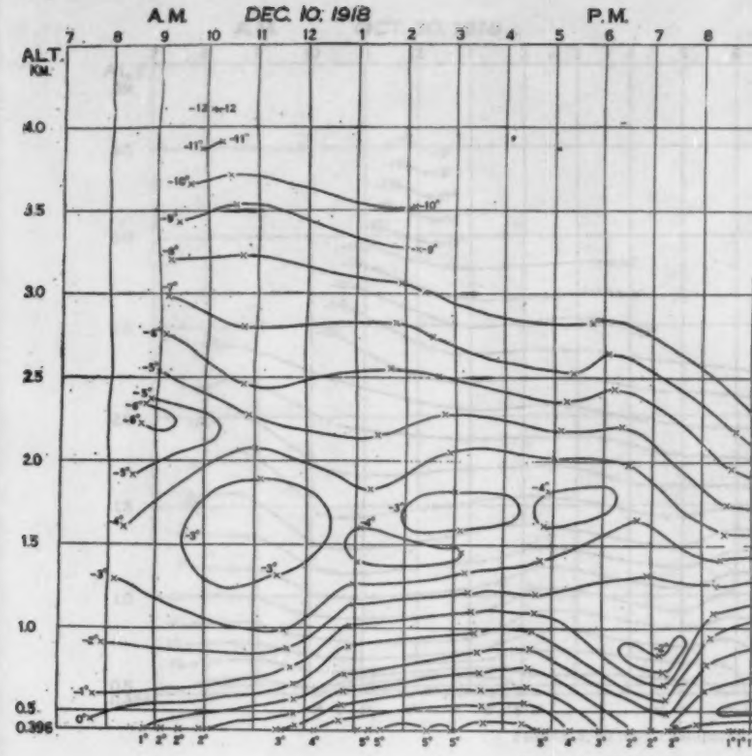


FIGURE 3.—Free-air temperatu

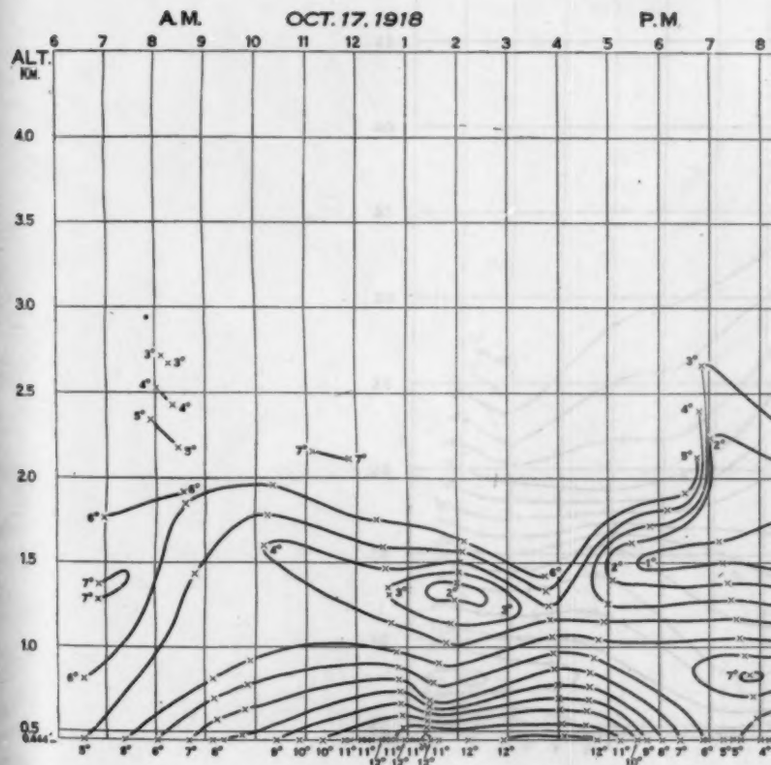
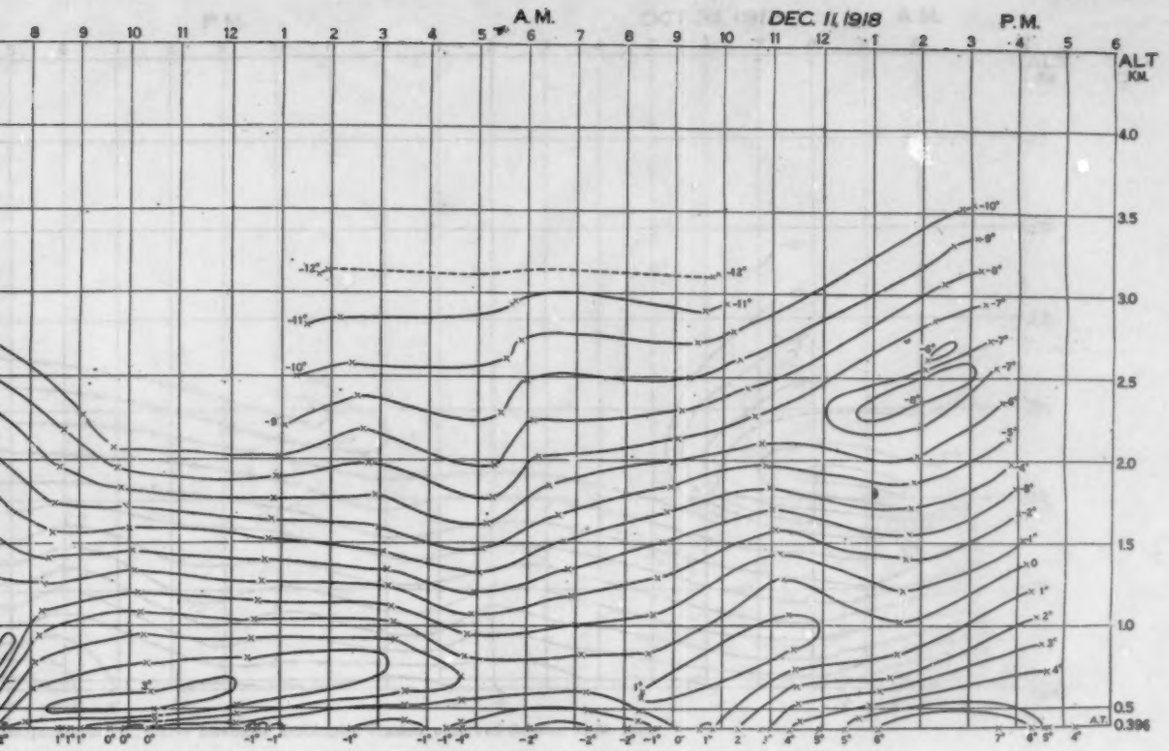
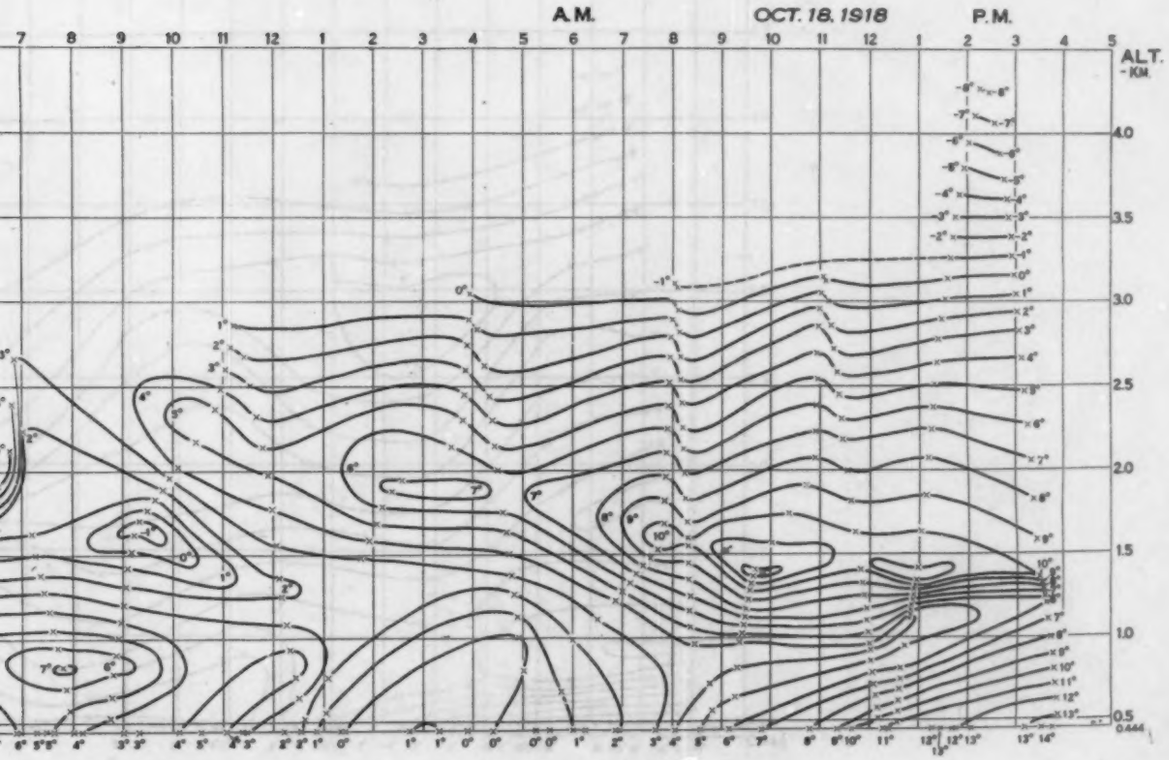


FIGURE 4.—Free-air temperatur



temperatures, °C., above Drexel Aerological Station; observed December 10–11, 1918.



temperatures, °C., above Ellendale Aerological Station; observed October 17–18, 1918.

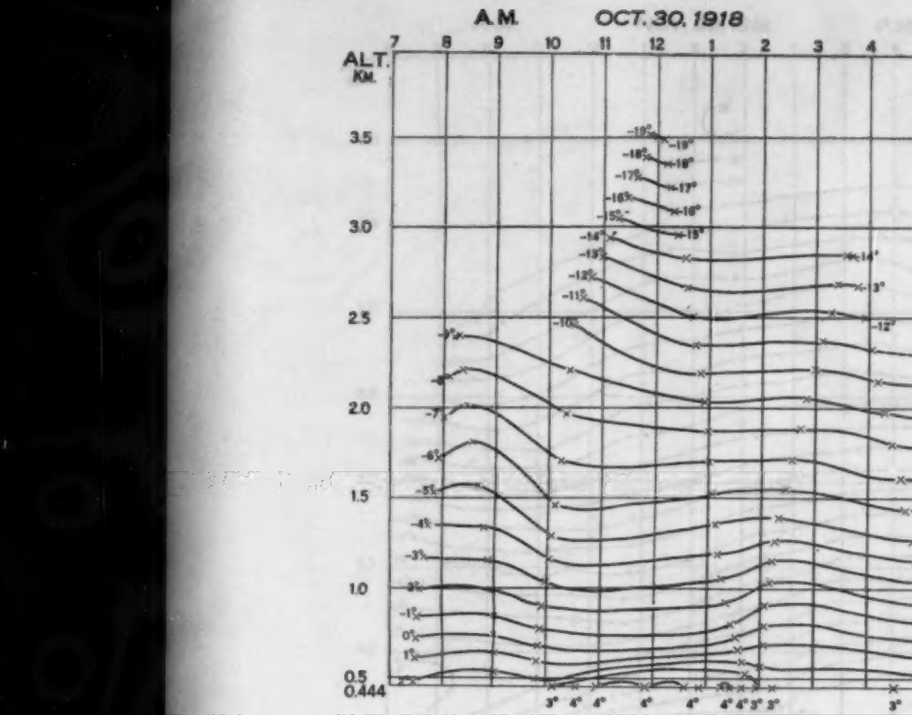


FIGURE 5.—Free-air

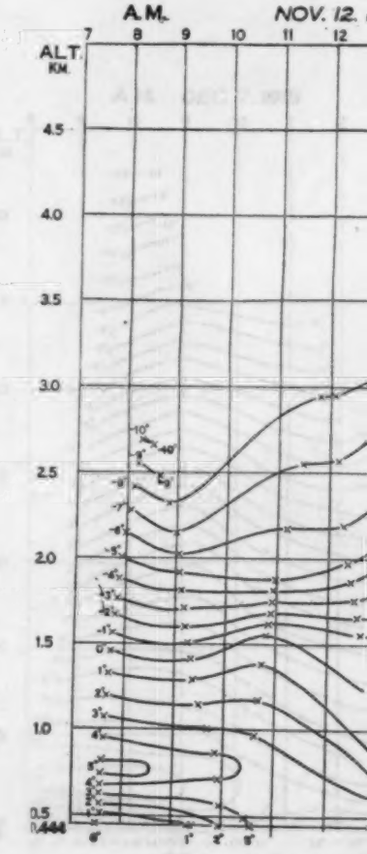
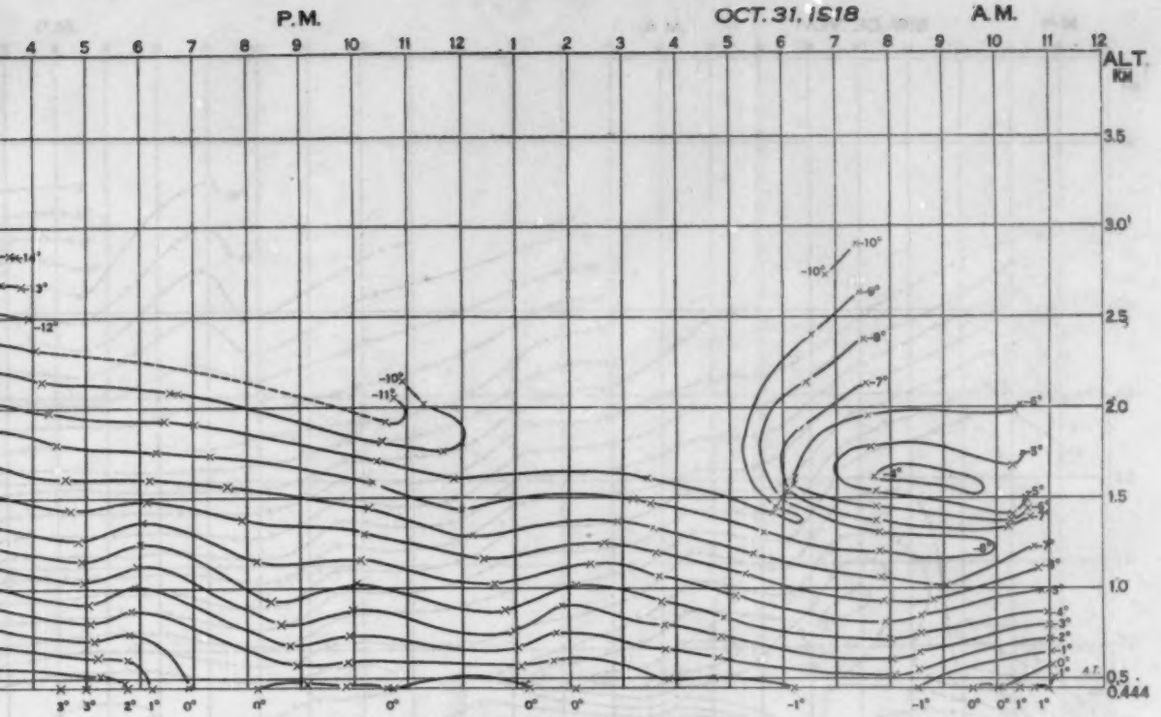
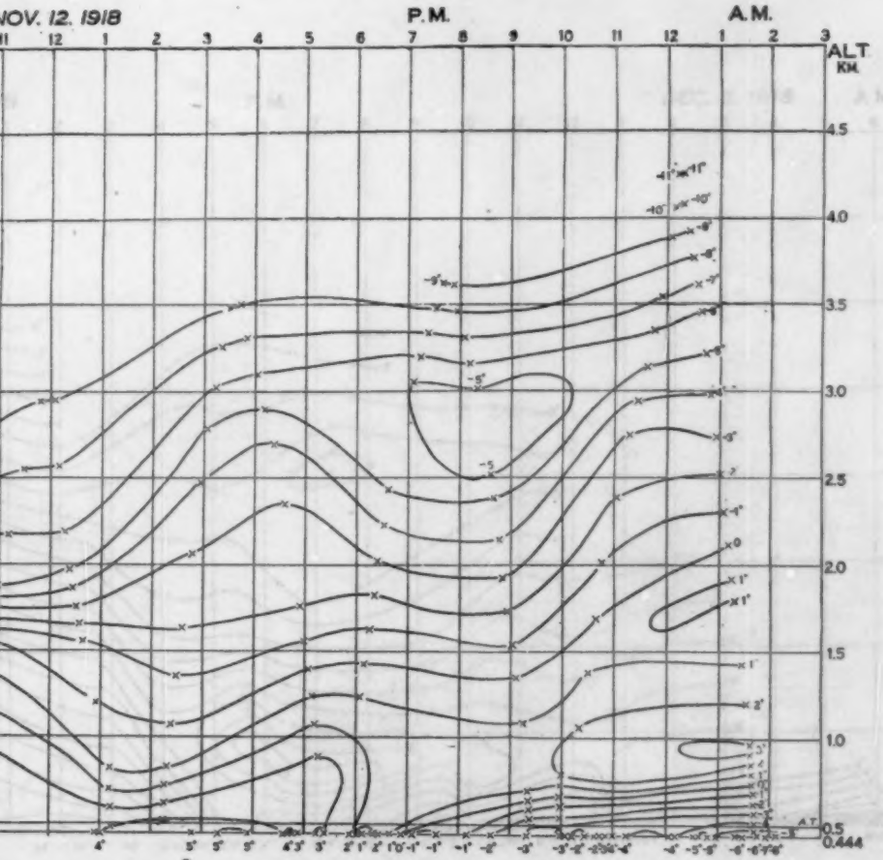


FIGURE 6.—Free-air tem



—Free-air temperatures, °C., above Ellendale Aerological Station; observed October 30–31, 1918.



Free-air temperatures, °C., above Ellendale Aerological Station; observed November 12–13, 1918.

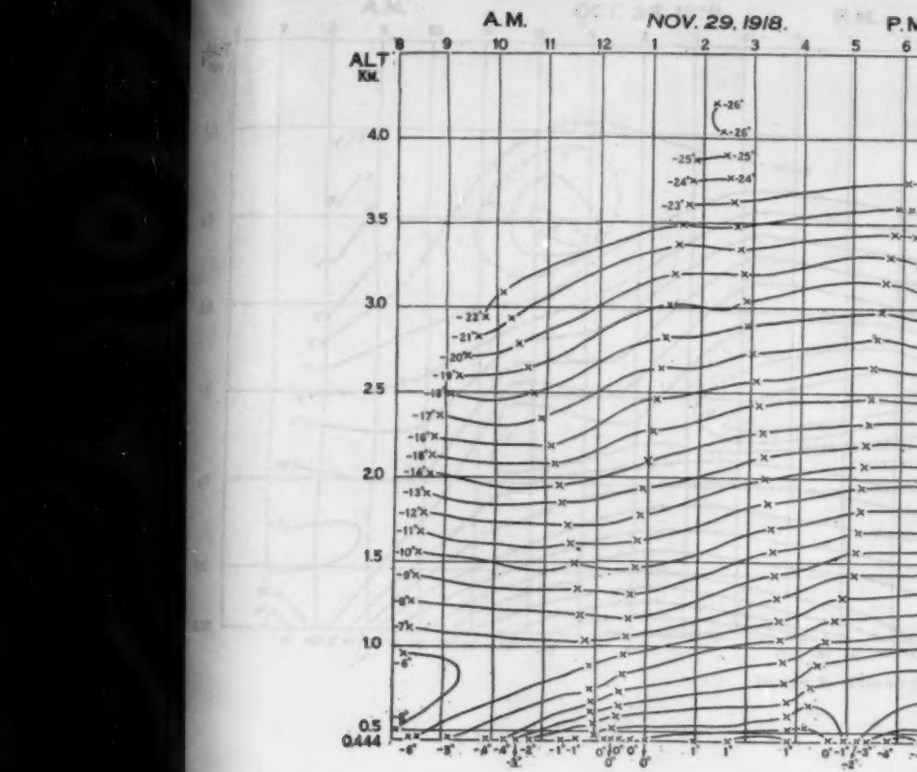


FIGURE 7.—Free-air te

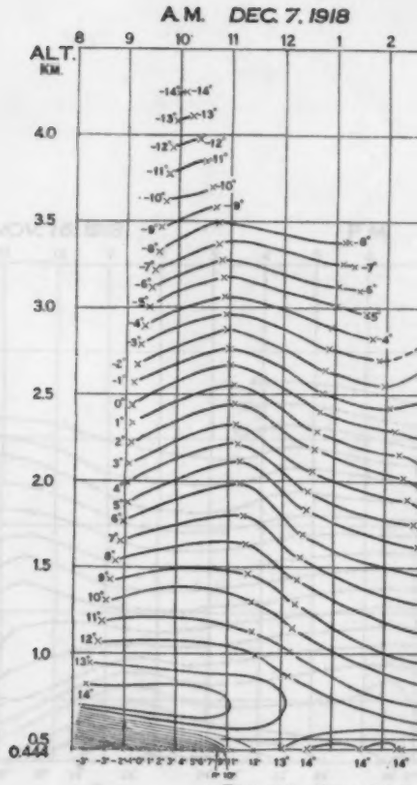
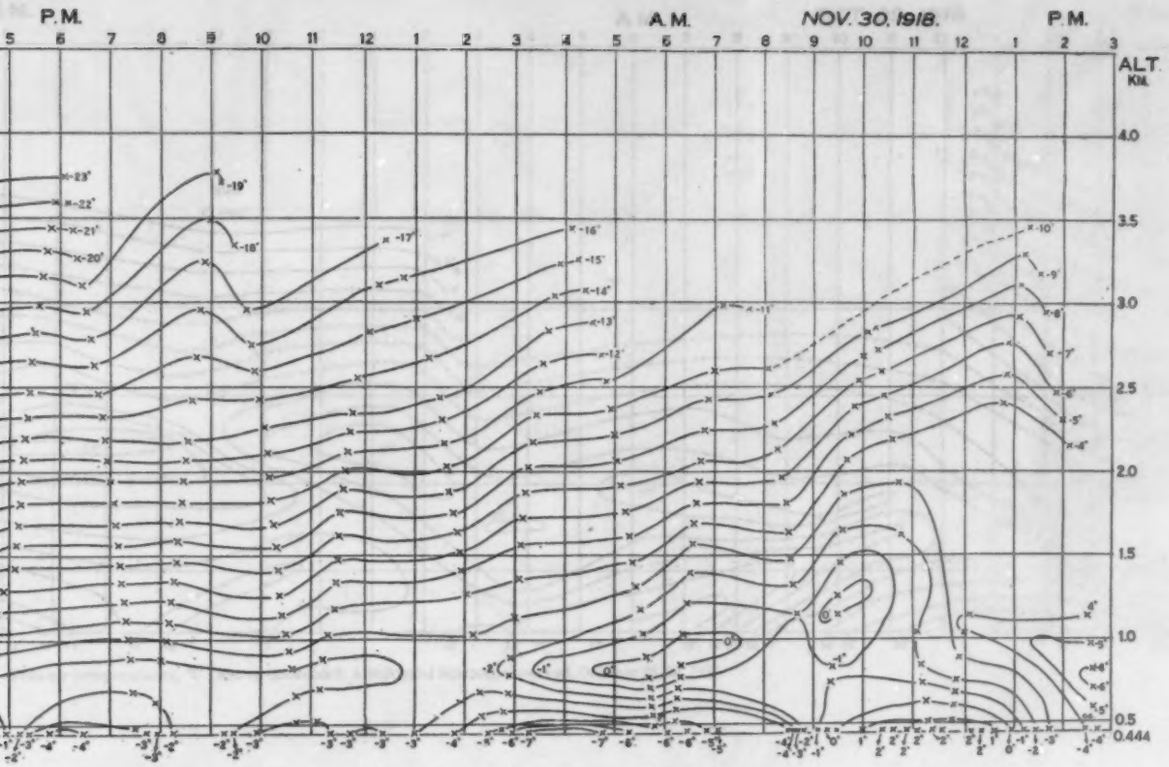
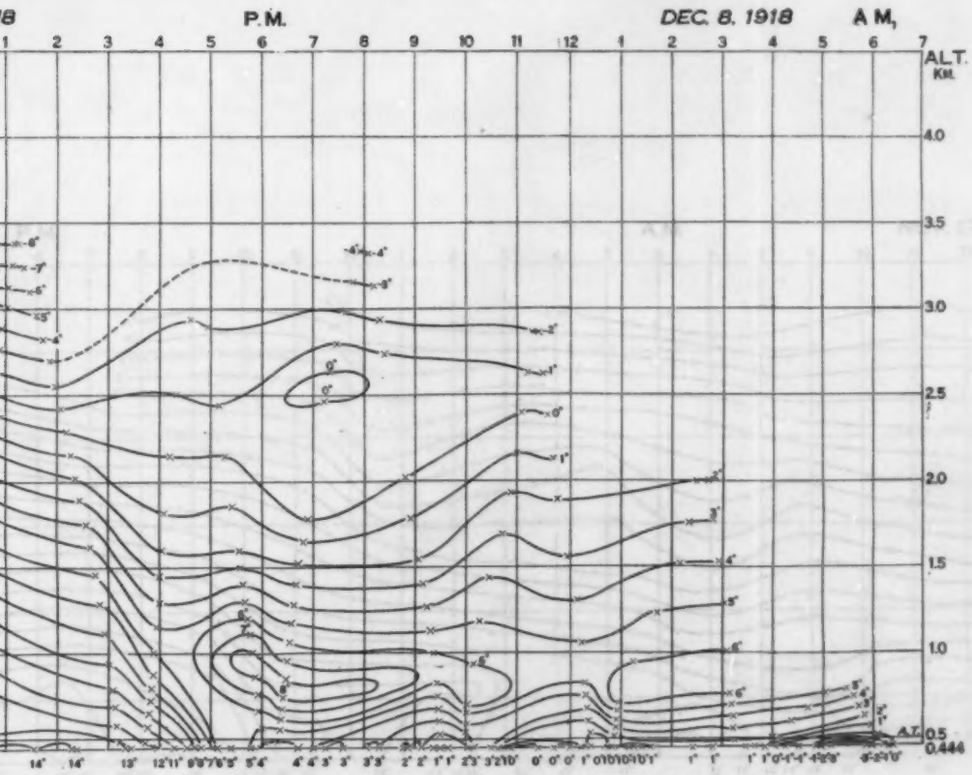


FIGURE 8.—Free-air temp

[Facing page 10.]



Free-air temperatures, °C., above Ellendale Aerological Station; observed November 29–30, 1918.



Free-air temperatures, °C., above Ellendale Aerological Station, observed December 7–8, 1918.

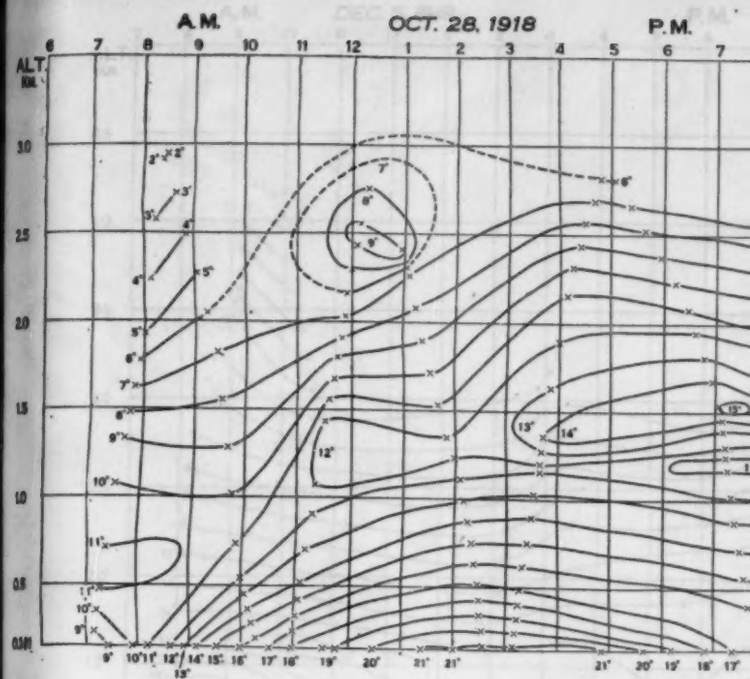


FIGURE 9.—Free-air te

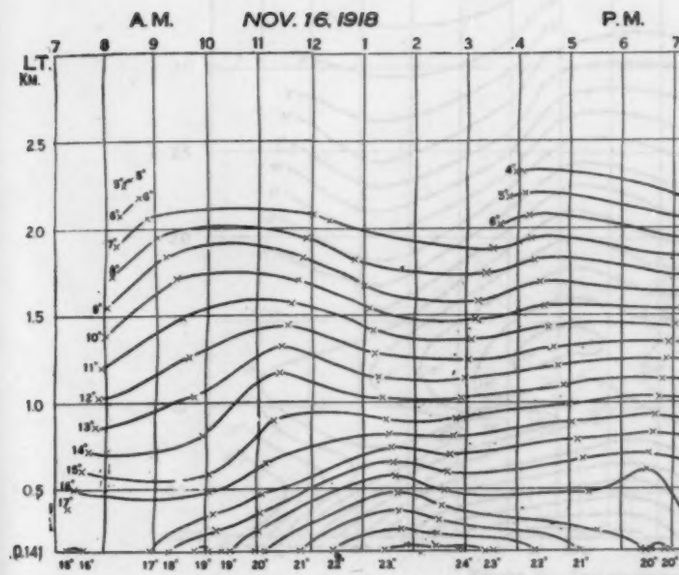
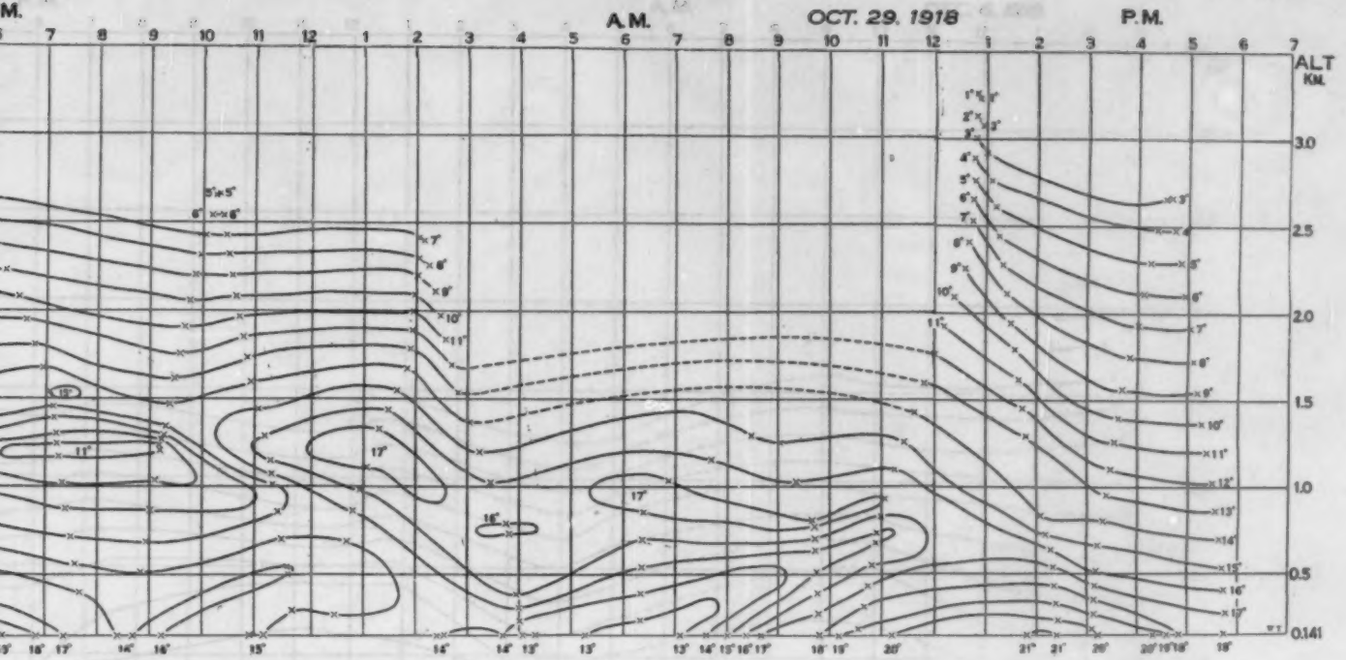
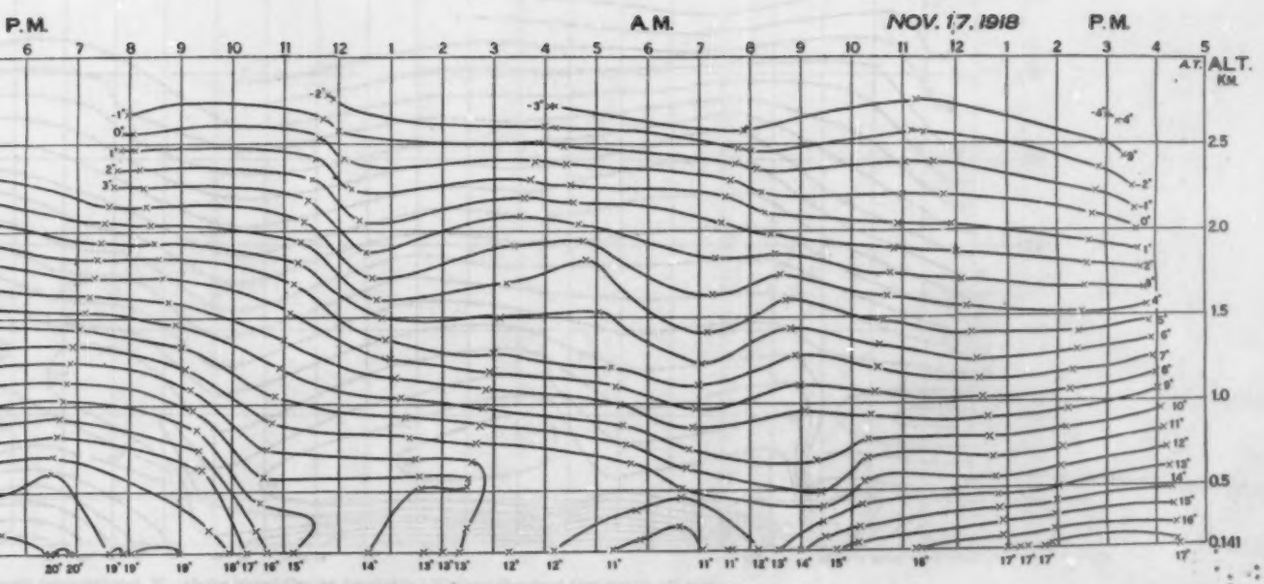


FIGURE 10.—Free-air te



Free-air temperatures, °C., above Groesbeck Aerological Station; observed October 28–29, 1918.



–Free-air temperatures, °C., above Groesbeck Aerological Station; observed November 16–17, 1918.

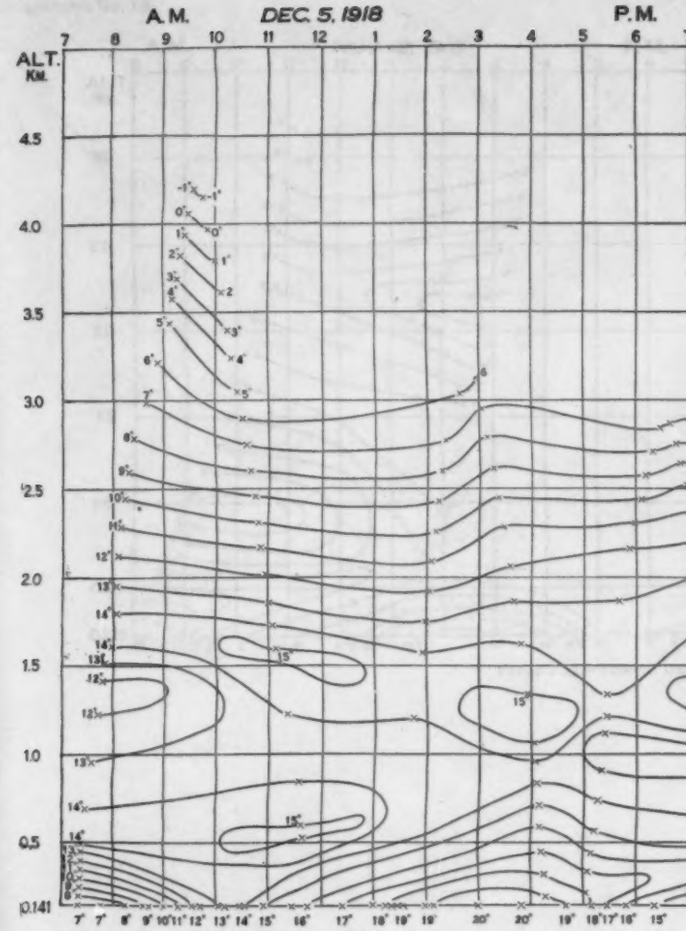


FIGURE 11.—Free-air t

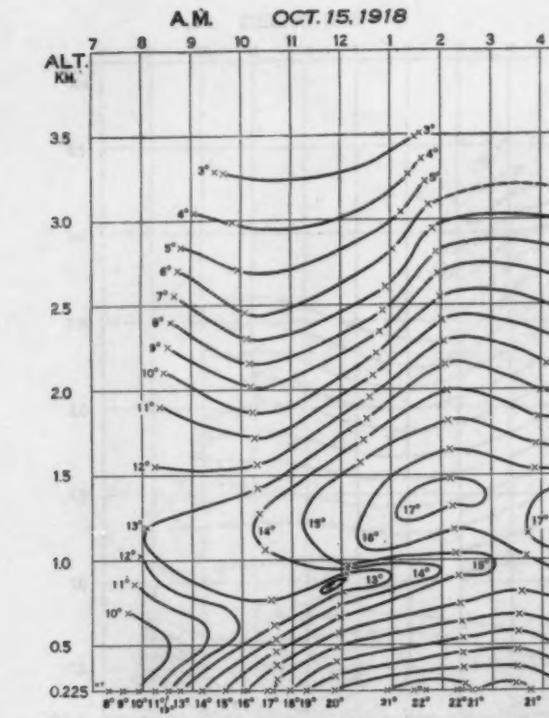
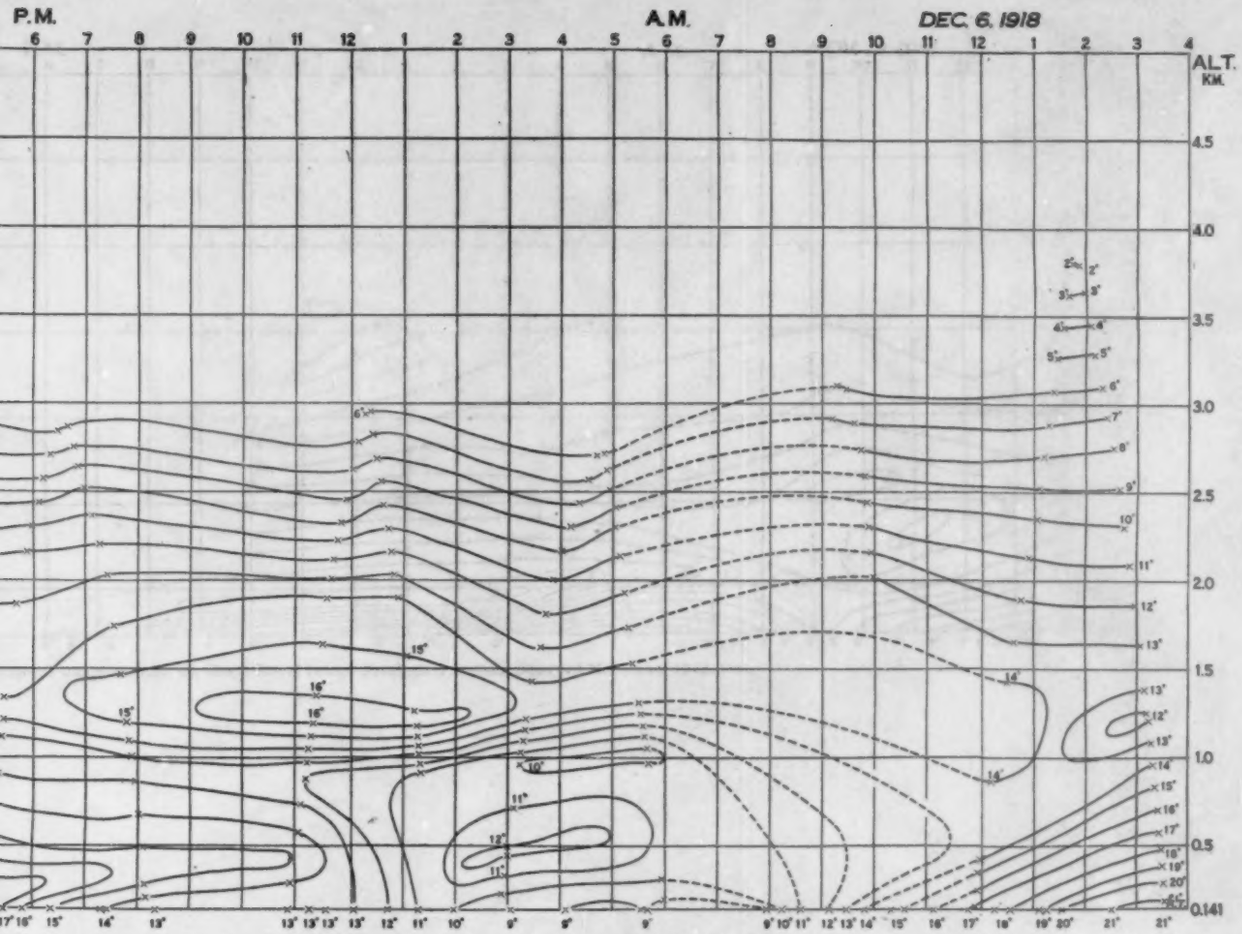
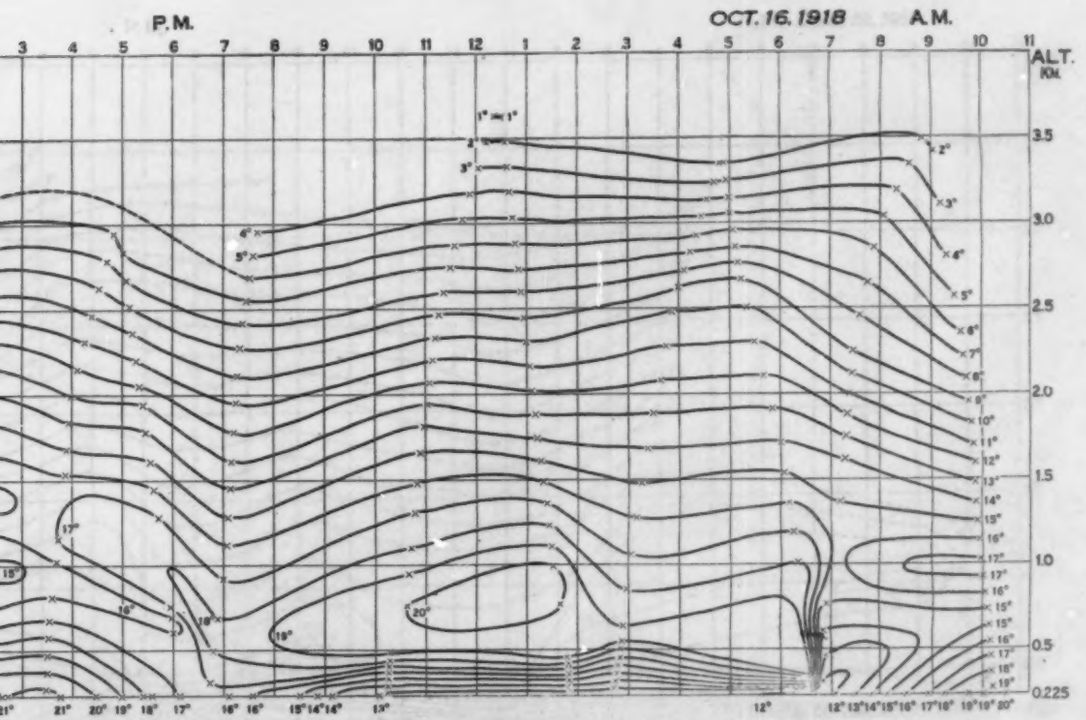


FIGURE 12.—Free-air tem

[Facing page 10.]



—Free-air temperatures, °C., above Gr esbeck Aerological Station; observed December 5-6, 1918.



ree-air temperatures, °C., above Royal Center Aerological Station; observed October 15-16, 1918.

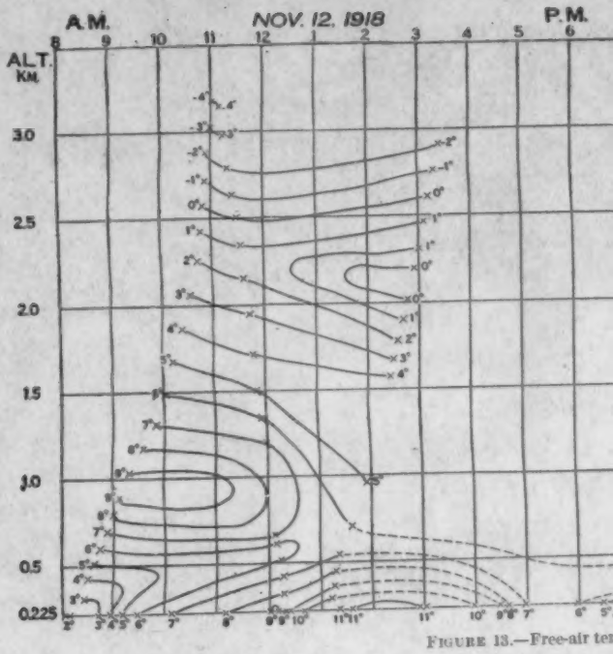


FIGURE 13.—Free-air tem

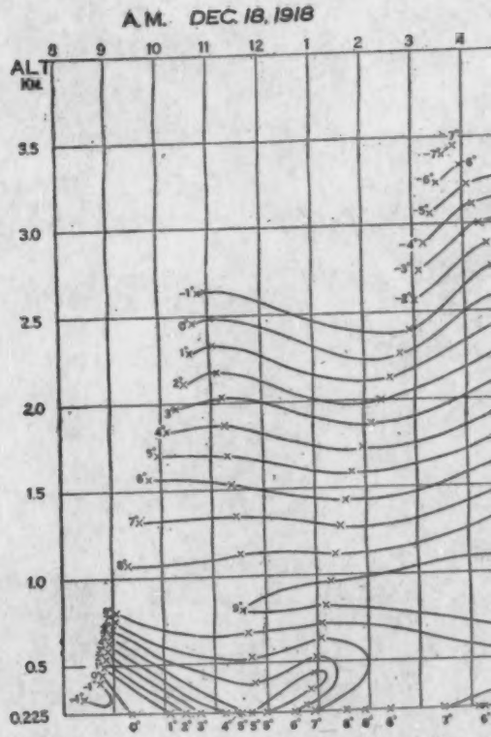
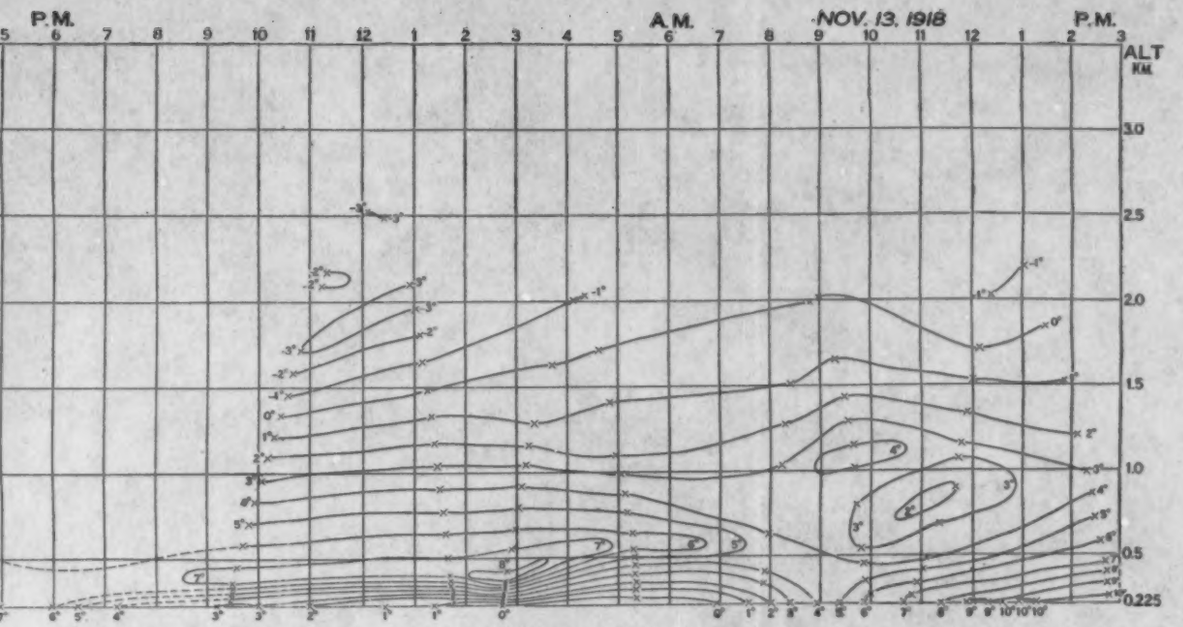
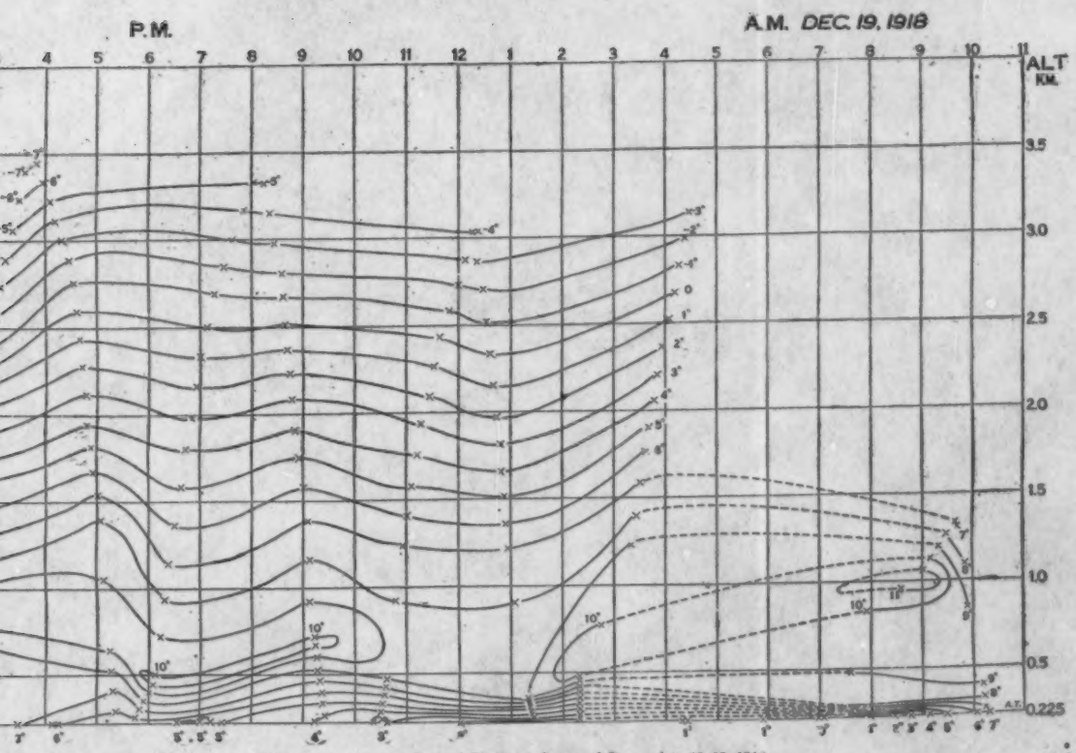


FIGURE 14.—Free-a



Free-air temperatures, °C., above Royal Center Aerological Station; observed November 12-13, 1918.



—Free-air temperatures, °C., above Royal Center Aerological Station, observed December 18-19, 1918.

FIG. 16.—Kite reel house and a kite in flight (Groesbeck).

FIG. 17.—Office building and instrumenta equipment (Groesbeck).

FIG. 18.—Beginning of a pilot balloon ascension (Groesbeck)

The kite field is practically level, and there are no obstructions in the way of kite flying other than the necessary buildings and telephone lines that run along the east and south sides of the field. The reel house is nearly in the center of the field and the power lines run to it in the reel shelter just to the rear of the reel, but ultimately will be driven by a 3-phase, 60-cycle, 5-horsepower alternating current motor. The reel is insulated in order that measurements of atmospheric electricity may be made during kite flights. Except when these measurements are being made a "ground" wire reduces to a minimum the possibility of danger from disruptive discharges while kites are up. In the office building there is a carpenter shop equipped in a limited way for the building and repair of kites, and a small room

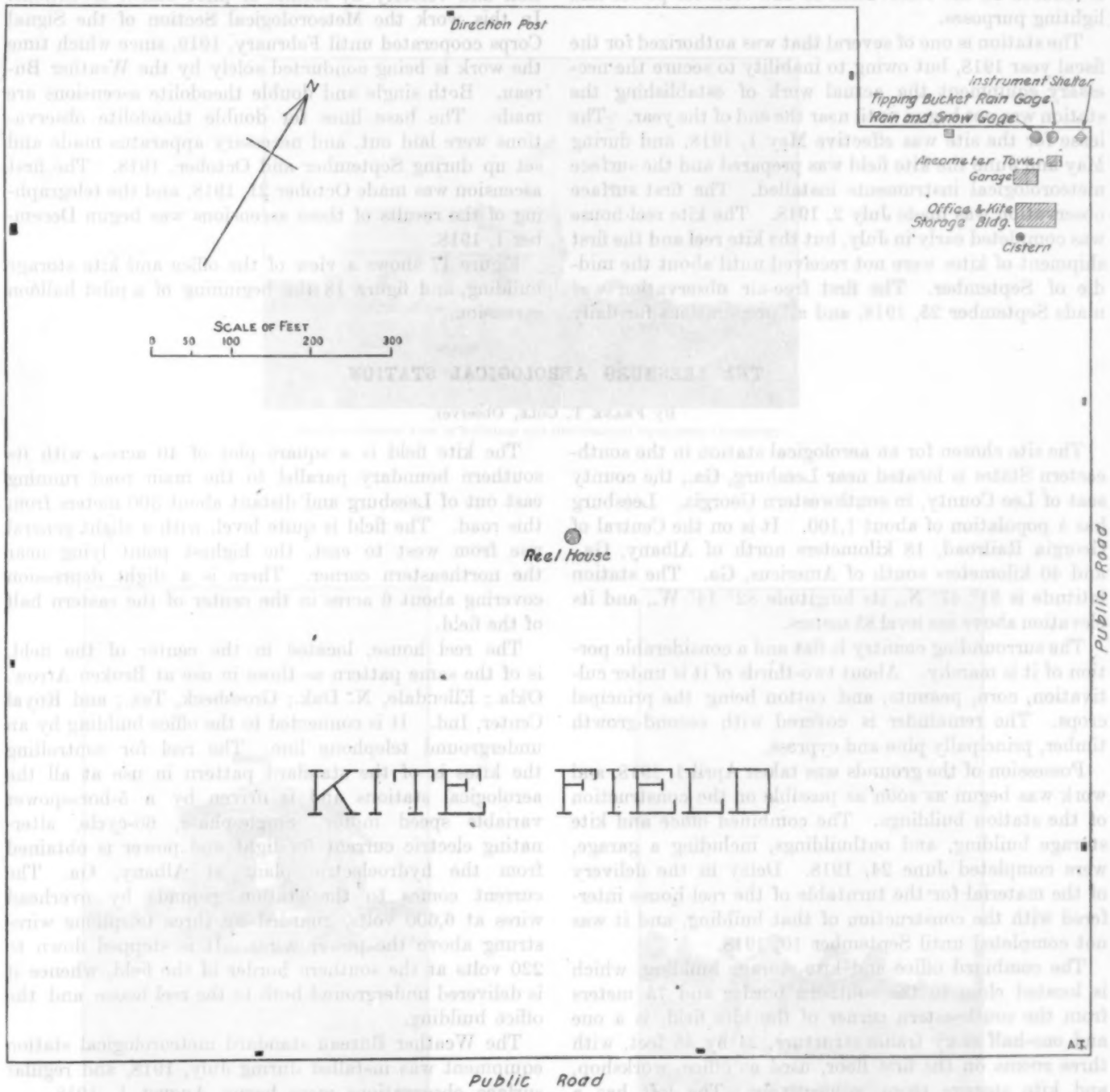


FIGURE 15.—Plot showing the position of buildings and kite field at Groesbeck, Tex.

under-ground. Figure 16 shows a view of the field and shelter.

The equipment is similar to that at the other aerological stations. For pulling in kites at the present time the kite reel is operated by a 2-horsepower gasoline engine set up

in the garage is used for testing and calibrating instruments.

The necessary electric power is obtained from the town power plant, about 1½ kilometers distant. The current is delivered on a 3-phase, 60-cycle, 2,200-volt circuit, and is reduced on the reservation to 220 volts for power and lighting purposes.

The station is one of several that was authorized for the fiscal year 1918, but owing to inability to secure the necessary equipment the actual work of establishing the station was not begun until near the end of the year. The lease for the site was effective May 1, 1918, and during May and June the kite field was prepared and the surface meteorological instruments installed. The first surface observation was made July 2, 1918. The kite reel house was completed early in July, but the kite reel and the first shipment of kites were not received until about the middle of September. The first free-air observation was made September 25, 1918, and all preparations for daily flights had been made by October 1, 1918. The telegraphing of free-air observations was begun November 2, 1918.

In addition to the regular free-air observations with kites the station is making observations of wind direction and velocity by means of pilot ballon ascentions. In this work the Meteorological Section of the Signal Corps cooperated until February, 1919, since which time the work is being conducted solely by the Weather Bureau. Both single and double theodolite ascensions are made. The base lines for double theodolite observations were laid out, and necessary apparatus made and set up during September and October, 1918. The first ascension was made October 21, 1918, and the telegraphing of the results of these ascensions was begun December 1, 1918.

Figure 17 shows a view of the office and kite storage building, and figure 18 the beginning of a pilot balloon ascension.

THE LEESBURG AEROLOGICAL STATION.

By Frank T. Cole, Observer.

The site chosen for an aerological station in the southeastern States is located near Leesburg, Ga., the county seat of Lee County, in southwestern Georgia. Leesburg has a popolation of about 1,100. It is on the Central of Georgia Railroad, 18 kilometers north of Albany, Ga., and 40 kilometers south of Americus, Ga. The station latitude is 31° 47′ N., its longitude 82° 14′ W., and its elevation above sea level 85 meters.

The surrounding country is flat and a considerable portion of it is marshy. About two-thirds of it is under cultivation, corn, peanuts, and cotton being the principal crops. The remainder is covered with second-growth timber, principally pine and cypress.

Possession of the grounds was taken April 1, 1918, and work was begun as soon as possible on the construction of the station buildings. The combined office and kite storage building, and outbuildings, including a garage, were completed June 24, 1918. Delay in the delivery of the material for the turntable of the reel house interfered with the construction of that building, and it was not completed until September 10, 1918.

The combined office and kite storage building, which is located close to the southern border and 75 meters from the southeastern corner of the kite field, is a one and one-half story frame structure, 24 by 48 feet, with three rooms on the first floor, used as office, workshop, and kite storage room, respectively. The loft has a finished floor and is used for storing general supplies, kites, and materials for kite repairs. The station buildings are 2 kilometers from the railway station at Leesburg and are reached by a private road that extends from the main road to the southeastern corner of the kite field.

The kite field is a square plot of 40 acres, with its southern boundary parallel to the main road running east out of Leesburg and distant about 300 meters from this road. The field is quite level, with a slight general rise from west to east, the highest point lying near the northeastern corner. There is a slight depression covering about 6 acres in the center of the eastern half of the field.

The reel house, located in the center of the field, is of the same pattern as those in use at Broken Arrow, Okla.; Ellendale, N. Dak.; Groesbeck, Tex.; and Royal Center, Ind. It is connected to the office building by an underground telephone line. The reel for controlling the kites is of the standard pattern in use at all the aerological stations and is driven by a 5-horsepower variable speed motor. Single-phase, 60-cycle, alternating electric current for light and power is obtained from the hydroelectric plant at Albany, Ga. The current comes to the station grounds by overhead wires at 6,600 volts, guarded by three telephone wires strung above the power wires. It is stepped down to 220 volts at the southern border of the field, whence it is delivered underground both to the reel house and the office building.

The Weather Bureau standard meteorological station equipment was installed during July, 1918, and regular surface observations were begun August 1, 1918.

Early in October, 1918, equipment for pilot balloon work was installed at the station by a detail of men from the Meteorological Section of the Signal Corps. The equipment consists of small storage tanks for compressed hydrogen, two aircraft theodolites, rubber balloons 6 and 9 inches in diameter, and the instruments

[To face p. 12.]

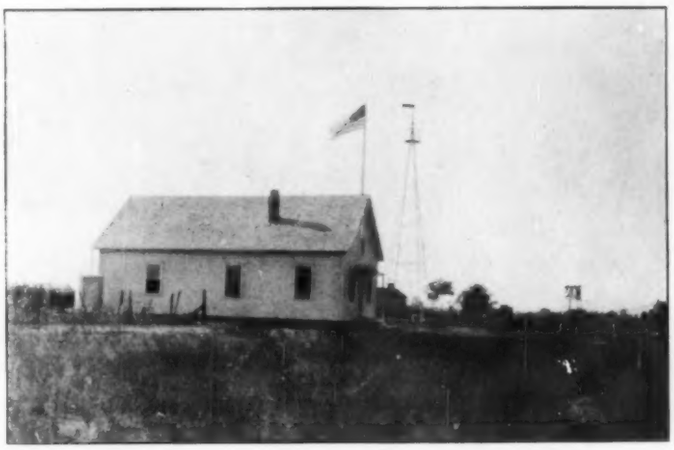


FIG. 20.—General view of buildings and instrumental equipment (Leesburg)

FIG. 21.—Kite reel house (Leesburg).

FIG. 22.—Beginning of a pilot balloon ascension (Leesburg).

for measuring the diameters and free lifts of the filled balloons when ready for flight and for plotting the flights when completed. The first pilot balloon flight was made October 9, 1918. The balloons are released and then followed through the theodolite as long as they flights are made on all days, at 8:00 a. m. and 4:00 p. m., seventy-fifth meridian time, except when rain is falling or dense fog prevails. The data obtained from the afternoon flight are coded and telegraphed to the Forecast Division of the Weather Bureau for use in forecasting

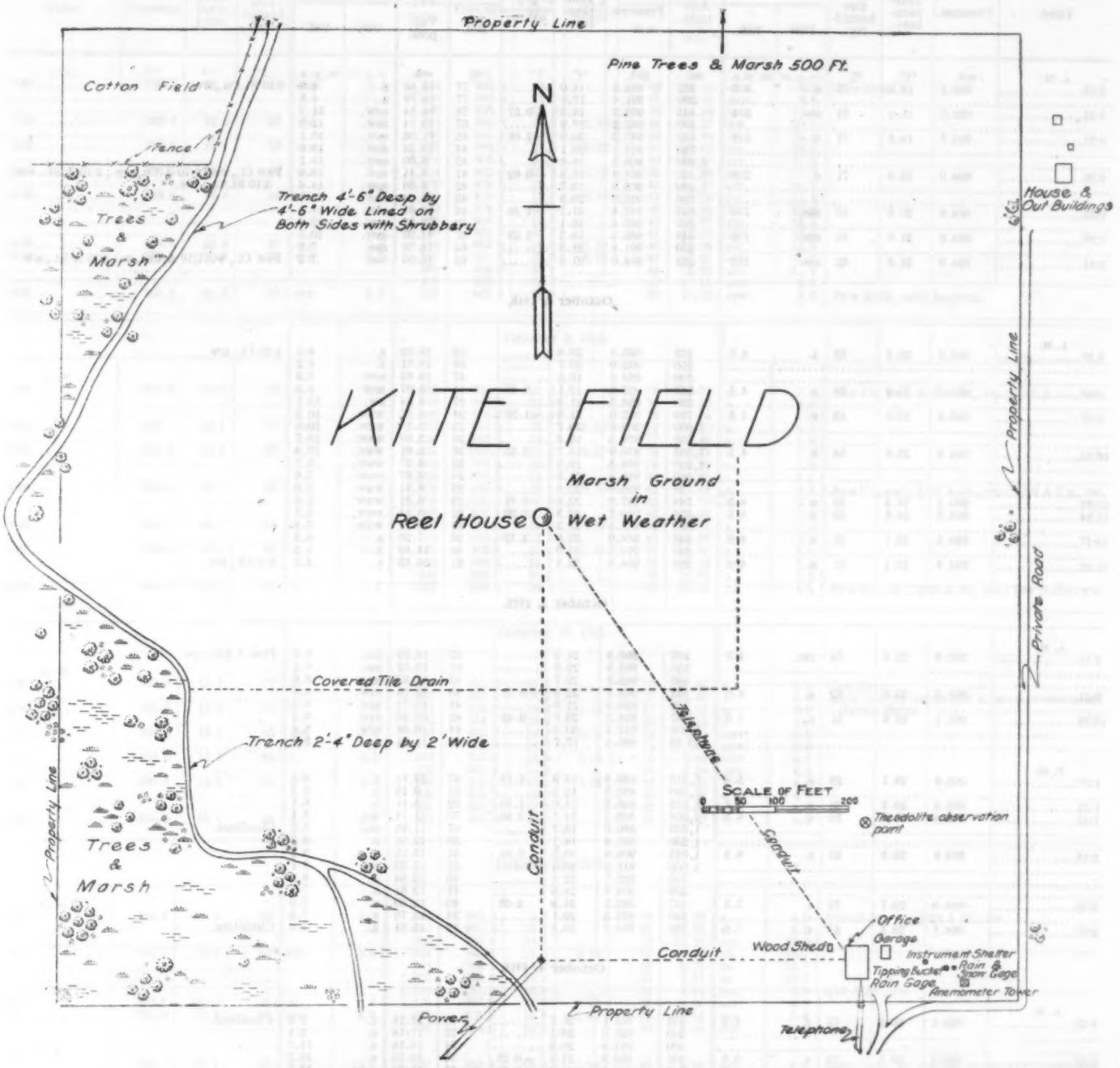


FIGURE 19.—Plot showing the position of buildings and kite field at Leesburg, Ga.

can be seen, the length of flight usually varying as the visibility of the atmosphere varies. Several flights have been followed to altitudes exceeding 11 kilometers, with an extreme altitude of 11,725 meters. The greatest horizontal distance that a balloon has been followed from this station is 53.8 kilometers. Pilot balloon wind direction and velocity aloft for the information of the Aviation Corps of the Army and the Aerial Mail Service.

Figure 19 is a sketch of the kite field; figure 20 shows the arrangement of buildings and instrumental equipment; figure 21, the reel house; and figure 22, the beginning of a pilot balloon ascension.

TABLE 5.—*Free-air data from kite flights at Broken Arrow Aerological Station, October, 1918.*

October 1, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
8:15	993.5	18.0	77	s.	4.0	233	993.5	18.0	.....	77	15.89	s.	4.0	9/10 St.Cu., nw.
						500	991.4	17.9	.....	77	15.79	s.	4.6	
8:23	993.6	18.2	76	sse.	5.4	445	969.3	16.8	0.57	76	14.54	ssw.	11.2	
						500	963.2	17.9	.....	67	13.74	ssw.	12.6	
8:31	993.7	18.3	73	s.	6.3	639	947.8	20.8	−2.06	45	11.06	ssw.	16.1	
						750	935.1	20.1	.....	44	10.35	ssw.	15.6	
						1,000	908.5	18.6	.....	42	9.00	ssw.	14.1	
9:00	994.0	19.0	71	s.	7.6	1,125	895.9	17.9	0.62	41	8.41	ssw.	13.4	Few Ci., sw.; 1/10 A.Cu., sw.; 2/10 A.St., nw.; 9/10 St.Cu., nw.
						1,000	908.9	18.7	.....	42	9.06	ssw.	14.4	
						750	935.3	20.3	.....	43	10.24	ssw.	16.3	
9:33	994.0	20.6	67	sse.	7.6	628	949.4	21.1	−1.56	44	11.01	ssw.	17.3	
						500	963.5	19.1	.....	60	13.27	ssw.	12.4	
9:36	994.0	21.0	65	sse.	7.6	449	969.3	18.3	1.53	67	14.09	ssw.	10.5	
						250	991.8	21.3	.....	62	15.70	sse.	7.5	
9:41	994.0	21.6	62	sse.	7.2	233	994.0	21.6	.....	62	16.00	sse.	7.2	Few Ci., w.; 1/10 A.Cu., w.; 5/10 A.St., nw.

October 2, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
8:56	995.0	20.8	69	s.	4.0	233	995.0	20.8	.....	69	16.95	s.	4.0	1/10 Ci., nw.
						250	992.9	20.7	.....	68	16.61	s.	4.2	
						500	964.5	19.5	.....	47	10.65	ssw.	7.3	
9:08	995.0	20.9	68	s.	4.5	579	955.6	19.1	0.49	41	9.07	ssw.	8.3	
						750	936.5	21.3	.....	27	6.84	sw.	10.1	
9:21	995.0	21.3	65	s.	4.5	790	932.0	21.8	−1.28	24	6.27	wsw.	10.5	
						1,000	909.8	20.7	.....	25	6.10	wsw.	10.6	
						1,250	884.5	19.4	.....	26	5.86	wsw.	10.7	
10:35	994.9	23.9	54	s.	4.5	1,385	870.9	18.7	0.56	26	5.61	wsw.	10.8	
						1,250	884.5	19.5	.....	25	5.67	wsw.	9.7	
						1,000	910.3	21.0	.....	24	5.97	wsw.	7.6	
						750	936.9	22.6	.....	23	6.31	wsw.	5.6	
10:32	994.6	24.5	53	s.	4.5	744	937.8	22.6	−0.81	23	6.31	wsw.	5.6	
10:34	994.6	24.6	52	s.	4.5	534	960.7	20.9	0.96	22	5.44	wsw.	5.5	
						500	964.5	21.2	.....	23	5.79	wsw.	5.4	
10:47	994.5	25.1	51	s.	4.9	325	984.0	22.9	2.72	26	7.26	s.	4.9	
						250	992.5	24.9	.....	46	14.49	s.	4.2	
10:52	994.4	25.4	51	s.	4.0	233	994.4	25.4	.....	51	16.55	s.	4.0	2/10 Ci., nw.

October 3, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
9:11	995.8	21.9	62	sse.	4.0	233	995.8	21.9	.....	62	16.29	sse.	4.0	Few A.Cu., nw.
						250	993.9	22.0	.....	61	16.13	sse.	4.2	
						500	965.8	22.7	.....	42	11.58	ssw.	8.0	
9:21	995.9	22.0	62	s.	4.0	523	963.1	22.8	−0.31	40	11.10	ssw.	8.4	
						750	938.8	21.8	.....	41	10.71	ssw.	8.4	
10:29	996.5	25.9	51	s.	4.0	987	914.2	20.7	0.45	43	10.50	ssw.	8.4	
						1,000	912.4	20.6	.....	44	10.68	ssw.	8.4	
						12,50	886.5	17.7	.....	88	11.74	s.	8.3	
P. M.														
1:07	995.9	29.1	36	s.	5.8	1,410	860.8	15.9	1.13	67	12.11	s.	8.3	
						1,500	860.8	15.2	.....	53	9.15	s.	8.2	
1:12	995.8	29.3	36	s.	5.4	1,639	846.5	14.0	1.54	32	5.11	s.	8.1	
1:15	995.8	29.3	36	s.	6.3	1,608	849.5	14.7	0.95	70	11.71	sse.	8.1	
						1,500	860.0	15.7	.....	67	11.95	sse.	8.3	Cloudless.
						1,250	885.4	18.1	.....	58	12.05	s.	8.8	
2:18	994.9	29.8	33	s.	6.3	1,018	909.4	20.3	0.82	51	12.15	s.	9.2	
						1,000	911.2	20.4	.....	51	12.22	s.	9.1	
						750	937.7	22.5	.....	46	12.54	s.	8.2	
						500	964.6	24.5	.....	41	12.61	s.	7.2	
2:36	994.8	29.7	32	s.	7.2	457	969.7	24.9	2.05	40	12.60	s.	7.0	
						250	992.5	29.1	.....	34	13.70	s.	7.6	
2:47	994.7	29.5	33	s.	7.6	233	994.7	29.5	.....	33	13.61	s.	7.6	Cloudless.

October 4, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
8:25	995.1	20.1	73	s.	1.3	233	995.1	20.1	.....	73	17.18	s.	1.3	Cloudless.
						250	993.0	20.1	.....	73	17.18	s.	2.1	
						500	964.9	20.8	.....	74	18.18	s.	14.0	
8:33	995.2	20.5	72	s.	0.6	591	954.9	21.1	−0.28	74	18.52	s.	18.3	
8:42	995.2	20.9	72	s.	0.6	742	938.4	21.9	−0.53	56	14.72	s.	15.8	
						750	937.5	21.9	.....	56	14.72	s.	15.8	
						1,000	911.0	21.0	.....	40	9.95	ssw.	15.0	
8:58	995.3	21.7	70	s.	0.6	1,032	907.6	20.9	0.34	38	9.39	ssw.	14.9	
						1,250	885.0	19.0	.....	39	8.57	sw.	14.8	
9:27	995.2	22.9	67	s.	1.3	1,340	876.8	18.2	0.80	40	8.36	sw.	14.8	
						1,250	885.0	18.8	.....	40	8.68	sw.	14.7	Few A.St., near horizon.
						1,000	911.0	20.6	.....	39	9.47	sw.	14.4	
10:04	995.0	24.8	62	s.	1.8	894	922.1	21.4	−0.54	39	9.94	ssw.	14.2	
						750	937.5	20.6	.....	58	14.08	ssw.	12.4	
10:09	994.9	25.1	62	s.	1.8	726	940.1	20.5	0.36	61	14.71	ssw.	12.1	
10:16	994.9	25.2	62	s.	0.9	560	958.2	21.1	1.50	74	18.52	ssw.	10.6	
						500	964.9	22.0	.....	71	18.77	ssw.	8.8	
						250	993.0	25.7	.....	59	19.49	s.	1.4	1/10 Ci., w.
10:24	994.8	26.0	58	s.	0.9	233	994.8	26.0	.....	58	19.50	s.	0.9	

TABLE 5.—*Free-air data from kite flights at Broken Arrow Aerological Station, October, 1918*—Continued.

October 5, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:47	988.3	22.1	62	ssw.	6.3	233	988.3	22.1	.....	62	16.49	ssw.	6.3	Cloudless.
						250	986.4	22.2	.....	61	16.33	ssw.	6.9	
						500	958.5	23.6	.....	50	14.56	sw.	15.6	
7:52	988.2	22.5	61	ssw.	5.8	626	944.8	24.3	−0.56	44	13.37	sw.	20.0	
						750	931.4	23.2	.....	48	13.65	sw.	19.4	
8:02	988.2	22.7	59	ssw.	7.2	963	909.0	21.2	0.92	54	13.60	sw.	18.5	
						1,000	905.1	21.6	.....	53	13.67	sw.	17.6	
8:05	988.2	22.9	59	ssw.	7.6	1,024	902.6	21.8	−0.98	52	13.58	sw.	17.0	
						1,250	879.5	20.3	.....	48	11.43	sw.	16.1	
8:34	988.4	23.6	58	ssw.	7.2	1,336	870.8	19.7	0.66	47	10.79	sw.	15.8	
						1,250	879.5	20.8	.....	46	10.96	sw.	15.8	
						1,000	905.1	22.0	.....	43	11.37	sw.	15.8	
						750	931.4	23.7	.....	41	12.02	sw.	15.8	
9:08	988.4	25.4	57	ssw.	6.7	674	939.9	24.2	−1.12	40	12.08	sw.	15.8	
9:12	988.4	25.6	57	ssw.	6.7	567	951.4	23.0	1.05	47	13.21	sw.	11.7	
						500	958.5	23.7	.....	48	12.93	sw.	11.1	
						250	986.4	26.3	.....	50	17.11	ssw.	8.7	
9:29	988.2	26.5	50	ssw.	8.5	233	988.2	26.5	.....	50	17.32	ssw.	8.5	Few A.St., near horizon.

October 7, 1918.

A. M.														
8:05	988.6	21.8	78	s.	5.4	233	988.6	21.8	.....	78	20.37	s.	5.4	Few Ci., sw.; 4/10 A.St., sw.; 3/10 A.Cu., sw.
						250	986.8	21.9	.....	78	20.50	s.	5.6	
						500	959.2	23.5	.....	73	21.14	s.	7.9	
8:16	988.7	22.1	76	sse.	5.4	539	954.8	23.7	−0.62	72	21.10	s.	8.3	
						750	932.6	22.5	.....	77	20.99	s.	7.8	
9:00	989.2	24.4	69	s.	5.4	803	926.9	22.2	0.57	78	20.88	s.	7.7	
						1,000	906.2	20.7	.....	79	19.29	s.	7.9	
						1,250	880.5	18.9	.....	81	17.69	s.	8.1	
9:29	989.4	25.7	66	s.	5.8	1,358	869.4	18.1	0.70	82	17.03	s.	8.2	Few Ci., sw.; 2/10 A.St., sw.; 1/10 A.Cu., sw.
						1,250	880.5	18.8	.....	82	17.79	s.	8.1	
						1,000	906.2	20.5	.....	83	20.02	s.	7.7	
9:49	989.5	26.0	65	s.	6.3	852	922.0	21.5	0.55	84	21.55	s.	7.5	
						750	933.0	22.6	.....	80	21.94	s.	6.7	
9:58	989.6	26.1	65	s.	5.4	563	953.1	23.1	1.03	78	22.05	s.	6.3	
						500	960.4	23.7	.....	76	22.28	s.	6.1	
						250	988.0	26.3	.....	69	23.61	s.	5.4	
10:08	989.6	26.5	68	s.	5.4	233	989.6	26.5	.....	68	23.55	s.	5.4	Few Ci., sw.; 2/10 A.St., sw.; few A.Cu., sw.

October 15, 1918.

A. M.														
7:46	995.6	13.1	72	s.	3.6	233	995.6	13.1	.....	72	10.86	s.	3.6	Cloudless.
						250	993.8	13.4	.....	67	10.30	s.	3.8	
8:04	995.7	14.2	68	s.	3.6	434	972.2	16.2	−1.54	17	3.13	s.	5.9	Light smoke began 8:00 a. m. and continued during flight.
						500	964.7	16.2	.....	23	4.24	s.	5.8	
9:23	996.0	18.3	45	sse.	5.4	733	939.2	16.0	0.07	44	8.00	ssw.	5.6	
						750	937.4	16.0	.....	39	7.09	ssw.	5.4	
9:53	996.0	19.0	44	s.	4.5	838	927.8	15.9	0.05	16	2.89	ssw.	4.6	
						750	937.4	15.9	.....	16	2.89	ssw.	4.6	
10:04	996.0	19.2	44	s.	4.5	600	954.0	15.9	1.04	16	2.89	s.	4.7	
						500	964.7	16.9	.....	23	4.43	s.	4.6	
						250	993.8	19.5	.....	42	9.52	s.	4.5	
10:10	995.9	19.7	43	s.	4.5	233	995.9	19.7	.....	43	9.87	s.	4.5	

October 21, 1918.

A. M.														
8:33	993.3	15.2	88	e.	4.9	233	993.3	15.2	.....	88	15.20	e.	4.9	3/10 Ci.St., w.; 5/10 A.St., sw.
						250	991.0	15.2	.....	87	15.02	e.	5.5	
						500	962.3	14.7	.....	73	12.21	ese.	13.0	
8:42	993.3	15.6	85	ese.	3.6	624	948.4	14.5	0.18	66	10.90	se.	16.7	
						750	934.5	14.2	.....	60	9.71	se.	14.7	
						1,000	907.6	13.6	.....	46	7.17	se.	10.7	
						1,250	881.0	13.0	.....	33	4.94	ese.	6.8	9/10 A.St., sw.
10:13	992.9	19.5	62	se.	8.9	1,373	867.8	12.7	0.24	27	3.97	ese.	4.8	
10:27	992.8	19.5	61	ese.	8.9	1,493	855.3	14.4	−1.42	19	3.12	ese.	3.4	
						1,500	854.0	14.2	.....	20	3.24	ese.	3.5	
P. M.														
12:21	991.1	20.1	56	se.	10.7	1,527	850.6	13.5	1.28	23	3.56	ese.	4.0	Solar halo, 22° radius, began 12:00-noon and continued at end of flight.
						1,500	852.8	13.5	.....	25	3.87	ese.	4.2	
						1,250	878.0	13.3	.....	45	6.86	se.	5.5	
						1,000	904.3	13.0	.....	65	9.74	ese.	6.9	
1:26	989.6	20.6	59	sse.	7.2	983	906.0	13.0	0.81	66	9.89	ese.	7.0	
						750	931.0	14.9	.....	63	10.67	ese.	6.8	
						500	958.8	16.9	.....	59	11.36	se.	6.5	
1:45	989.2	20.7	57	sse.	7.6	476	961.7	17.1	1.44	59	11.50	se.	6.5	
						250	987.1	20.3	.....	57	13.58	se.	7.2	
1:52	989.1	20.6	57	se.	7.2	233	989.1	20.6	.....	57	15.54	se.	7.2	10/10 A.St., sw.

TABLE 5.—*Free air data from kite flights at Broken Arrow Aerological Station, October, 1918*—Continued.

October 23, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
12:55	985.2	15.4	96	nne.	5.8	233	985.2	15.4	.....	96	16.80	nne.	5.8	10/10 St., nne.; light rain.
						250	983.0	15.3	.....	96	16.68	nne.	5.8	
						500	954.3	14.0	.....	98	15.66	nne.	5.8	
1:08	985.1	15.5	96	nne.	5.4	512	953.3	13.9	0.54	98	15.56	nne.	5.8	Altitude of St. base about 450 m.
						750	926.4	13.4	.....	96	14.76	nne.	5.6	
1:35	984.8	15.6	96	nne.	4.5	760	925.4	13.4	0.15	96	14.76	nne.	5.6	
						750	926.4	13.4	.....	96	14.76	nne.	5.6	
						500	953.9	13.6	.....	96	14.96	ne.	5.8	
1:52	984.6	15.7	96	nne.	3.6	449	959.9	13.7	0.97	96	15.05	ne.	5.8	Altitude of St. base about 400 m.
						250	982.4	15.6	.....	95	16.83	nne.	3.3	
2:00	984.5	15.8	95	nne.	3.1	233	984.5	15.8	.....	95	17.05	nne.	3.1	10/10 St., nne.; light rain continued.

October 24, 1918.

A. M.														
7:57	987.5	14.0	94	nnw.	8.9	233	987.5	14.0	.....	94	15.02	nnw.	8.9	9/10 A.St.,n.; 1/10 St., n.
						250	985.5	13.9	.....	94	14.93	nnw.	9.2	
						500	956.8	12.0	.....	98	13.75	n.	13.1	Altitude of St. base about 550 m.
8:02	987.5	14.1	93	n.	7.2	532	953.0	11.7	0.77	98	13.48	n.	13.6	3/10 A.St., n.; 7/10 St., n.
						750	928.6	11.9	.....	79	11.00	nne.	14.5	
8:24	987.7	14.2	94	nnw.	7.2	930	909.0	12.1	−0.10	63	8.90	nne.	15.3	
						1,000	901.4	11.7	.....	67	9.21	nne.	14.6	
						1,250	875.0	10.1	.....	79	9.76	nne.	12.0	7/10 A.St., n.; 3/10 St., n.
						1,500	849.5	8.5	.....	92	10.21	nne.	9.5	
10:09	988.2	15.6	85	n.	7.2	1,645	835.0	7.6	0.52	100	10.44	nne.	8.3	3/10 A.St., n.; 2/10 St., n.
						1,500	849.5	8.2	.....	88	9.57	nne.	9.4	
P. M.														
12:33	987.5	19.4	65	n.	8.9	1,308	869.3	9.0	0.80	73	8.38	nne.	10.9	Few Cl., w.; 2/10 St.Cu., nne.
						1,250	875.0	9.5	.....	73	8.67	nne.	10.7	
						1,000	901.4	11.5	.....	74	10.04	nne.	10.0	
						750	928.9	13.5	.....	75	11.60	nne.	9.2	
1:08	987.2	19.6	60	nne.	8.0	521	954.6	15.3	1.49	76	13.21	nne.	8.5	
						500	956.8	15.6	.....	75	13.29	nne.	8.4	
						250	985.5	19.3	.....	63	14.11	nne.	7.7	
1:17	987.1	19.6	62	nne.	7.6	233	987.1	19.6	.....	62	14.14	nne.	7.6	3/10 Cl., w.; 2/10 St.Cu., nne.

October 25, 1918.

P. M.														
1:33	983.6	18.7	71	sse.	8.0	233	983.6	18.7	.....	71	15.31	sse.	8.0	10/10 St.Cu., sse.
						250	981.5	18.5	.....	71	15.12	sse.	7.5	
2:01	983.5	19.0	71	sse.	7.2	366	968.2	17.2	1.13	74	14.52	sse.	4.4	9/10 St.Cu., s.
						500	950.2	16.3	.....	78	14.45	sse.	4.5	
						750	925.8	14.7	.....	85	14.22	sse.	4.6	
2:44	983.5	19.4	71	sse.	8.0	798	920.5	14.4	0.73	86	14.10	sse.	4.6	
						750	925.8	14.8	.....	83	13.97	sse.	4.7	
3:01	983.5	19.5	70	sse.	8.0	500	953.2	16.8	1.01	70	13.39	sse.	5.1	
						250	981.5	19.3	.....	68	15.23	sse.	7.1	
3:09	983.3	19.5	68	sse.	7.2	233	983.3	19.5	.....	68	15.42	sse.	7.2	9/10 St.Cu., s.

October 28, 1918 (No. 1).

A. M.														
8:14	976.5	8.3	72	s.	8.9	233	976.5	8.3	.....	72	7.88	s.	8.9	1/10 Cl., ssw.
						250	974.5	8.4	.....	71	7.82	s.	9.4	
						500	945.5	10.1	.....	52	6.43	s.	16.2	
8:19	976.4	8.4	72	s.	8.0	613	932.6	10.9	−0.68	43	5.61	s.	19.3	
8:32	976.2	9.0	69	s.	7.2	746	917.9	14.5	−2.32	24	3.96	ssw.	19.0	
						500	944.7	9.8	.....	46	5.58	s.	18.6	
9:18	975.5	11.2	61	s.	10.3	460	949.2	9.0	1.32	50	5.74	s.	18.5	Few Cl., sw.; 2/10 A.St., sw.
						250	973.4	11.8	.....	59	8.17	s.	8.1	
9:28	975.3	12.0	60	s.	7.2	233	975.3	12.0	.....	60	8.42	s.	7.2	2/10 Cl., sw.; 2/10 A.St., sw.

October 28, 1918 (No. 2).

P. M.														
2:06	970.8	18.3	42	s.	17.4	233	970.8	18.3	.....	42	8.83	s.	17.4	3/10 A.Cu., sw.; 5/10 St.Cu., sw.
						250	968.8	18.2	.....	42	8.78	s.	17.5	
						500	940.8	16.0	.....	43	7.82	s.	18.7	
2:15	970.7	18.3	42	s.	17.0	614	928.2	15.0	0.87	43	7.33	s.	19.2	
						750	913.3	13.9	.....	44	6.99	s.	18.9	
						1,000	886.5	11.8	.....	47	6.50	s.	18.2	
2:40	970.5	18.6	39	s.	17.0	1,251	860.3	9.8	0.92	49	5.94	s.	17.6	
						1,000	886.5	12.3	.....	45	6.44	s.	17.5	Few A.Cu., sw.; 3/10 St.Cu., sw.
						750	913.3	14.9	.....	41	6.95	s.	17.4	
3:35	970.5	19.4	38	s.	11.2	523	938.1	17.2	0.69	38	7.46	s.	17.3	
						500	940.8	17.4	.....	38	7.55	s.	17.1	
						250	968.8	19.1	.....	42	9.29	s.	14.5	
3:48	970.5	19.2	42	s.	14.3	233	970.5	19.2	.....	42	9.34	s.	14.3	1/10 St.Cu., sw.

TABLE 5.—*Free-air data from kite flights at Broken Arrow Aerological Station, October, 1918*—Continued.

October 29, 1918.

Surface.						At different heights above sea.									
				Wind.						Humidity.		Wind.			
Time.	Pressure.	Temperature.	Relative humidity.	Dir.	Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Rel.	Vap pres.	Dir.	Vel.	Remarks.	
A. M.	*mb*	°C	%		*m. p. s*	*m*	*mb*	°C		%	*mb*		*m. p. s*		
8:16	979.8	9.4	78	nw.	6.3	233	979.8	9.4	.....	78	9.20	nw.	6.3	1/10 A.St., sw.	
						250	977.8	9.3	.....	77	9.02	nw.	7.2		
8:22	979.8	9.6	77	nw.	7.6	374	963.3	8.8	0.43	71	8.04	nnw.	13.6		
						500	949.2	9.4	.....	58	6.84	nnw.	14.2		
						750	921.6	10.7	.....	32	4.12	nnw.	15.3		
8:44	980.0	9.9	75	nw.	7.2	840	911.0	11.2	−0.52	23	3.06	nnw.	15.7		
						1,000	893.5	10.3	.....	29	3.63	nnw.	15.2		
						1,250	866.9	8.9	.....	39	4.45	nnw.	14.3		
9:11	980.2	10.4	68	nnw.	8.0	1,439	847.8	7.8	0.57	47	4.97	nnw.	13.7	Few A.St., sw.	
						1,500	841.5	7.5	.....	48	4.98	nnw.	13.7		
						1,750	816.4	6.3	.....	54	5.16	nnw.	13.8		
9:53	980.4	11.6	64	nnw.	6.7	1,808	810.9	6.0	0.38	55	5.14	nnw.	13.8		
						1,750	816.4	6.2	.....	56	5.31	nnw.	13.9		
						1,500	842.0	6.9	.....	61	6.07	nnw.	14.4		
10:35	980.4	12.7	56	nnw.	7.6	1,456	846.3	7.0	0.73	62	6.21	nnw.	14.5		
						1,250	867.7	8.5	.....	56	6.22	nnw.	14.5		
						1,000	894.2	10.3	.....	49	6.14	nnw.	14.4		
11:00	980.4	14.2	53	nnw.	7.2	879	907.8	11.2	−1.83	45	5.98	nnw.	14.4		
11:12	980.4	14.7	50	nnw.	6.3	819	914.2	10.1	0.87	46	5.69	nnw.	12.0		
						750	921.8	10.7	.....	46	5.92	nnw.	11.3		
						500	949.5	12.9	.....	47	6.99	nnw.	8.9		
						250	978.2	15.1	.....	48	8.24	nnw.	6.5		
11:23	980.4	15.2	48	nnw.	6.3	233	980.4	15.2	.....	48	8.29	nnw.	6.3	Few A.St., sw.	

October 30, 1918.

A. M.															
8:06	990.0	8.4	87	nw.	5.4	233	990.0	8.4	.....	87	9.59	nw.	5.4	Few A.St., w.	
						250	988.0	8.4	.....	86	9.48	nw.	5.9		
						500	958.8	8.5	.....	77	8.55	nnw.	12.6		
8:12	990.0	9.0	83	nw.	5.4	607	946.3	8.6	−0.05	73	8.15	n.	15.5		
						750	930.0	7.8	.....	72	7.62	n.	15.7		
						1,000	902.1	6.2	.....	71	6.73	n.	16.1		
						1,250	875.5	4.6	.....	69	5.85	nnw.	16.4		
8:54	990.5	11.0	72	n.	5.8	1,444	855.3	3.4	0.62	68	5.30	nnw.	16.7		
						1,500	849.4	3.1	.....	63	4.81	nnw.	17.0		
						1,750	823.7	1.9	.....	38	2.66	nnw.	18.4		
9:24	990.6	11.4	72	n.	5.4	1,760	822.8	1.8	0.51	37	2.58	nnw.	18.5		
9:30	990.6	11.6	72	n.	5.8	1,789	819.8	2.7	−3.10	29	2.15	nnw.	19.3	Few A.St., w.	
						2,000	798.5	1.1	.....	40	2.65	nnw.	18.7		
						2,250	774.1	−0.8	.....	52	2.97	nnw.	17.9		
10:14	990.7	12.7	68	n.	4.0	2,425	757.4	−2.1	0.73	61	3.13	nnw.	17.4		
						2,250	774.1	−0.9	.....	52	2.95	nnw.	17.6		
						2,000	798.5	1.5	.....	39	2.66	nnw.	17.8		
10:49	990.8	13.8	63	nnw.	4.5	1,865	812.1	1.9	0.33	32	2.24	nnw.	17.9		
						1,750	823.7	2.3	.....	36	2.60	nnw.	17.4		
11:10	990.9	14.1	61	nnw.	4.5	1,564	842.9	2.9	0.66	42	3.16	n.	16.5		
						1,500	849.4	3.3	.....	44	3.41	n.	15.9		
						1,250	875.9	5.0	.....	52	4.53	n.	13.3		
						1,000	903.1	6.6	.....	60	5.85	n.	10.7		
						750	931.2	8.2	.....	68	7.39	n.	8.2		
11:26	990.9	14.5	54	n.	4.5	575	951.2	9.4	1.66	73	8.61	n.	6.4		
						500	959.8	10.6	.....	69	8.82	n.	5.9		
						250	988.8	14.8	.....	57	9.59	n.	4.1		
11:34	990.9	15.1	56	n.	4.0	233	990.9	15.1	.....	56	9.61	n.	4.0	Few St.Cu., n.	

October 31, 1918.

A. M.															
8:06	997.5	4.8	72	nnw.	8.0	233	997.5	4.8	.....	72	6.19	nnw.	8.0	4/10 St.Cu., nnw.	
						250	995.3	4.6	.....	72	6.11	nnw.	8.3		
						500	965.4	2.3	.....	78	5.62	nnw.	12.7		
8:15	997.6	4.8	72	nnw.	8.0	662	946.1	0.8	0.93	82	5.31	nnw.	15.6		
						750	936.0	0.6	.....	77	4.91	nnw.	15.3		
						1,000	907.2	0.0	.....	61	3.73	nnw.	14.3		
8:32	997.9	4.7	69	nnw.	10.3	1,097	896.3	−0.3	0.25	55	3.28	nnw.	13.9	1/10 St.Cu., nnw.	
						1,250	879.8	0.4	.....	31	1.95	nnw.	14.1		
9:09	998.6	4.4	72	n.	8.0	1,303	874.2	0.7	−0.49	23	1.48	nnw.	14.2		
						1,500	853.0	−0.2	.....	28	1.68	nnw.	15.0		
9:22	998.9	4.3	70	nnw.	8.0	1,537	849.3	−0.4	0.34	29	1.71	nnw.	15.1		
						1,500	853.0	−0.3	.....	31	1.85	nnw.	15.1		
						1,250	880.5	0.2	.....	44	2.73	n.	15.4		
9:37	999.2	4.5	68	n.	8.0	1,136	893.1	0.5	−0.68	50	3.16	n.	15.5		
						1,000	908.7	−0.4	.....	59	3.49	n.	12.9		
9:38	999.2	4.6	68	n.	8.0	870	923.4	−1.3	1.05	67	3.67	n.	10.4		
						750	937.6	−0.1	.....	76	4.61	nnw.	9.9		
9:55	999.6	5.2	69	nnw.	7.2	679	946.1	0.7	0.99	82	5.27	nnw.	9.6		
						500	967.5	2.5	.....	76	5.56	nnw.	7.9		
						250	997.8	4.9	.....	69	5.98	nnw.	5.0		
10:03	999.7	5.1	68	nnw.	5.4	233	999.7	5.1	.....	68	5.98	nnw.	5.4	2/10 St.Cu., nnw.	

TABLE 6.—*Free-air data from kite flights at Broken Arrow Aerological Station, November, 1918.*

November 1, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δ *t* / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb*	°*C*	%		*m. p. s*	*m*	*mb*	°*C*		%	*mb*		*m. p. s.*	
8:12	996.7	4.2	85	s.	4.0	233	996.7	4.2	.....	85	7.01	s.	4.0	Cloudless.
						250	994.6	4.3	.....	84	6.98	s.	4.2	
						500	964.5	5.5	.....	63	5.69	s.	7.0	
8:18	996.7	4.6	83	s.	4.0	593	953.8	6.0	−0.50	55	5.14	s.	8.1	
						750	936.0	6.5	.....	53	5.13	ssw.	9.1	
						1,000	907.9	7.3	.....	49	5.01	sw.	10.8	
8:55	996.7	6.6	77	sse.	4.0	1,172	889.2	7.8	−0.31	47	4.97	wsw.	11.9	
						1,250	881.1	7.7	.....	47	4.94	wsw.	11.7	
						1,500	854.9	7.2	.....	48	4.88	w.	11.1	
9:53	996.7	9.0	69	sse.	6.3	1,713	832.9	6.8	0.18	49	4.84	w.	10.5	
						1,500	854.9	7.2	.....	46	4.88	wsw.	11.4	
						1,250	881.1	7.6	.....	42	4.38	sw.	12.4	
						1,000	907.9	8.1	.....	38	4.10	sw.	13.4	
11:07	996.2	11.5	61	s.	6.7	808	929.2	8.4	−0.74	35	3.86	ssw.	14.2	
						750	935.5	8.0	.....	42	4.51	ssw.	13.8	
11:10	996.2	11.6	60	s.	6.7	565	957.1	6.6	1.63	62	6.04	s.	12.4	
						500	964.5	7.6	.....	61	6.37	s.	11.1	
						250	994.0	11.7	.....	58	7.98	s.	6.1	
11:28	996.0	12.0	58	s.	5.8	233	996.0	12.0	.....	58	8.14	s.	5.8	Cloudless.

November 2, 1918.

A. M.														
9:00	992.3	11.8	60	s.	8.0	233	992.3	11.8	.....	60	8.30	s.	8.0	Few Ci., w.
						250	990.7	11.7	.....	60	8.25	s.	8.8	
9:04	992.3	11.9	60	s.	8.5	455	966.1	10.1	0.77	62	7.66	s.	18.5	
						500	960.9	10.5	.....	61	7.75	s.	19.3	
9:07	992.3	12.1	60	s.	8.5	660	942.9	12.1	−0.98	57	8.05	s.	22.2	
						750	932.8	12.0	.....	61	8.56	s.	22.2	
						1,000	905.8	11.8	.....	73	10.10	s.	22.2	
9:51	992.6	13.8	58	s.	8.0	1,184	886.2	11.6	−0.12	81	11.06	s.	22.2	
						1,000	905.8	11.0	.....	74	9.72	s.	22.0	
10:45	992.4	16.8	48	s.	11.2	902	916.7	10.6	0.64	69	8.82	s.	21.8	
						750	933.2	11.6	.....	63	8.01	s.	19.9	
11:00	992.3	17.0	48	s.	12.1	591	951.1	12.6	1.42	57	8.32	s.	17.9	
						500	961.5	13.9	.....	54	8.58	s.	16.1	
						250	990.7	17.5	.....	46	9.20	s.	11.0	
11:12	992.4	17.7	45	s.	10.7	233	992.4	17.7	.....	45	9.11	s.	10.7	Few Ci., w.; few St.Cu., ssw.

November 4, 1918.

A. M.														
8:01	993.3	13.2	89	s.	5.8	233	993.2	13.2	.....	89	13.50	s.	5.8	6/10 St.Cu., ssw.
						250	991.5	13.2	.....	88	13.35	s.	6.9	
8:04	993.3	13.2	89	s.	5.8	381	975.9	13.0	0.13	83	12.43	s.	16.2	
						500	962.0	15.0	.....	77	13.13	s.	15.8	
8:07	993.3	13.2	89	s.	5.8	586	952.6	16.5	−1.71	73	13.70	s.	15.5	
						750	934.4	15.8	.....	74	13.28	ssw.	13.3	
						1,000	907.3	14.8	.....	75	12.62	sw.	9.9	1/10 St.Cu., ssw.
8:37	993.3	13.9	85	s.	5.8	1,018	905.4	14.7	0.42	75	12.55	sw.	9.6	
						1,250	880.9	12.9	.....	80	11.90	ssw.	9.2	3/10 St.Cu., s.
9:30	993.5	15.0	82	s.	6.7	1,443	861.1	11.3	0.71	84	11.25	s.	8.8	
						1,250	880.9	12.5	.....	82	11.88	s.	10.0	5/10 St.Cu., s.
						1,000	907.3	14.0	.....	79	12.62	s.	11.6	
						750	934.4	15.6	.....	76	13.47	ssw.	13.3	8/10 St.Cu., s.
10:14	993.6	15.8	84	s.	5.4	620	949.3	16.4	−1.21	75	13.99	ssw.	14.1	
						500	962.8	15.0	.....	84	14.32	ssw.	9.0	
10:17	993.6	16.0	84	s.	5.4	488	964.2	14.8	0.51	85	14.31	ssw.	8.6	
						250	991.5	16.0	.....	83	15.09	s.	5.6	
10:20	993.6	16.1	83	s.	5.4	233	993.6	16.1	.....	83	15.19	s.	5.4	9/10 St.Cu., s.

November 5, 1918.

A. M.														
8:06	989.9	14.3	77	sse.	8.9	233	989.9	14.3	.....	77	12.55	sse.	8.9	9/10 St.Cu., s.
						250	988.4	14.3	.....	77	12.55	sse.	10.2	
8:08	989.9	14.4	77	sse.	8.9	413	969.0	13.9	0.22	78	12.34	sse.	23.6	
						500	958.9	14.5	.....	78	12.88	sse.	23.4	
						750	931.4	16.3	.....	76	14.08	sse.	22.8	
8:19	989.9	15.0	75	sse.	9.8	768	929.5	16.4	−0.70	76	14.17	sse.	22.8	
						1,000	904.4	15.3	.....	75	13.04	sse.	20.0	
9:22	990.0	16.5	76	s.	10.7	1,237	879.7	14.2	0.48	74	11.98	s.	17.1	
						1,000	905.0	15.4	.....	81	14.18	s.	19.3	
						750	932.2	16.6	.....	89	16.81	sse.	21.5	
10:23	990.2	16.8	77	sse.	10.7	700	937.6	16.9	−1.10	91	17.52	sse.	22.0	
10:26	990.2	16.9	77	sse.	9.8	564	952.4	15.4	0.48	84	14.70	sse.	18.3	
						500	959.8	15.7	.....	83	14.81	sse.	16.8	
						250	988.4	16.9	.....	77	14.82	sse.	10.7	
10:30	990.2	17.0	77	sse.	10.3	233	990.2	17.0	.....	77	14.92	sse.	10.3	9/10 St.Cu., s.

TABLE 6.—*Free-air data from kite flights at Broken Arrow Aerological Station, November, 1918*—Continued.

November 6, 1918.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
8:00	989.2	17.0	84	se.	7.2	233	989.2	17.0	.....	84	16.28	se.	7.2	10/10 St.Cu., sw.
						250	987.5	17.0	.....	84	16.28	se.	7.8	
						500	959.0	17.1	.....	90	17.55	sse.	17.2	
8:14	989.3	17.1	84	se.	6.7	644	943.0	17.2	−0.05	94	18.44	sse.	22.6	
						750	931.0	16.6	.....	94	17.76	sse.	22.5	
						1,000	903.9	15.2	.....	94	16.23	sse.	22.4	
						1,250	878.0	13.7	.....	94	14.74	s.	22.3	
9:26	989.7	17.9	86	se.	4.5	1,339	869.1	13.2	0.66	94	14.26	s.	22.2	
10:20	990.0	19.3	83	s.	8.9	1,250	878.0	13.8	.....	94	14.83	s.	22.1	Rain from 9:07 to 11:00 a. m.
						1,040	900.8	15.4	−0.67	94	16.45	s.	21.8	
10:22	990.0	19.4	83	s.	8.0	1,000	904.9	15.1	.....	95	16.20	s.	21.8	
						965	908.8	14.9	0.51	95	16.09	s.	21.8	
10:46	990.1	19.4	85	sse.	8.0	750	932.0	16.0	.....	92	16.73	sse.	19.4	
						652	943.0	16.5	0.69	90	16.89	sse.	18.3	
						500	959.9	17.5	.....	88	17.60	sse.	14.3	
						250	988.4	19.3	.....	85	19.03	s.	7.6	
10:58	990.2	19.4	85	s.	7.2	233	990.2	19.4	.....	85	19.15	s.	7.2	5/10 A.St., s.; 5/10 St.Cu., s.

November 7, 1918.

A. M.														
7:52	985.2	20.0	89	s.	11.2	233	985.2	20.0	.....	89	20.81	s.	11.2	10/10 St., s.
						250	983.0	19.9	.....	89	20.68	s.	11.4	Light rain ended 8:15 a. m.
						500	955.0	18.5	.....	91	19.28	s.	14.9	
						750	927.8	17.2	.....	94	18.44	s.	18.3	
7:58	985.2	20.0	89	s.	11.2	763	926.4	17.1	0.55	94	18.33	s.	18.5	
						1,000	901.2	16.4	.....	94	17.53	s.	9.7	
8:25	985.2	20.0	89	s.	12.5	1,142	886.3	16.0	0.36	94	17.09	s.	4.4	5/10 St.Cu., sw.; 5/10 St., s.
						1,000	901.2	16.6	.....	95	17.95	s.	8.2	
9:03	985.2	20.1	89	s.	11.2	764	926.4	17.6	0.47	96	19.32	s.	14.6	10/10 St., s.
						750	927.8	17.7	.....	96	19.44	s.	14.5	Altitude of St. base about 700 m.
						500	955.0	18.8	.....	94	20.40	s.	12.9	
						250	983.0	20.0	.....	91	21.28	s.	11.3	
9:17	985.2	20.1	91	s.	11.2	233	985.2	20.1	.....	91	21.41	s.	11.2	10/10 St., s.

November 9, 1918.

P. M.														
2:42	997.5	14.0	48	nw.	5.8	233	997.5	14.0	.....	48	7.67	nw.	5.8	Cloudless.
						250	995.2	13.8	.....	48	7.57	nw.	5.9	
						500	965.8	11.2	.....	52	6.92	nw.	7.1	
2:56	997.4	14.2	49	nw.	5.8	659	947.9	9.6	1.03	54	6.45	nw.	7.9	
						750	937.1	8.7	.....	56	6.30	nw.	8.3	
						1,000	909.2	6.0	.....	63	5.89	nnw.	9.2	
4:17	997.5	13.4	54	nnw.	4.0	1,147	893.2	4.5	1.00	67	5.64	nnw.	9.8	
						1,000	909.2	5.9	.....	65	6.04	nnw.	9.5	
						750	937.1	8.3	.....	61	6.68	nnw.	9.0	
4:37	997.6	13.1	54	nnw.	4.9	545	961.1	10.3	0.83	57	7.14	nnw.	8.5	
						500	965.8	10.7	.....	57	7.34	nnw.	7.9	
						250	995.2	12.7	.....	55	8.08	nnw.	4.2	
4:47	997.6	12.9	55	nnw.	4.0	233	997.6	12.9	.....	55	8.16	nnw.	4.0	Cloudless.

November 11, 1918.

A. M.														
7:31	998.4	5.0	92	s.	5.4	223	998.4	5.0	.....	92	8.02	s.	5.4	Cloudless.
						250	996.2	5.4	.....	89	7.98	s.	5.9	
7:35	998.4	5.0	92	s.	5.4	459	971.2	9.8	−2.12	46	5.58	s.	12.5	
						500	966.3	9.8	.....	44	5.33	s.	12.0	
						750	938.2	10.2	.....	34	4.23	s.	8.7	
						1,000	911.7	10.5	.....	23	2.92	ssw.	5.5	
10:20	999.3	12.2	68	s.	5.4	1,027	909.0	10.5	−0.12	22	2.79	ssw.	5.1	
						1,250	885.3	9.1	.....	22	2.54	ssw.	5.5	
						1,500	859.0	7.5	.....	23	2.39	sw.	6.0	
10:50	999.1	13.8	61	s.	7.2	1,729	835.0	6.0	0.64	23	2.15	sw.	6.5	
						1,750	832.8	6.0	.....	23	2.15	sw.	6.5	
						2,000	807.6	5.6	.....	22	2.00	sw.	6.7	
						2,250	783.6	5.2	.....	21	1.86	wsw.	6.9	
						2,500	759.9	4.8	.....	19	1.63	wsw.	7.0	
11:01	999.0	14.2	56	ssw.	6.3	2,594	751.2	4.6	0.16	19	1.61	wsw.	7.1	
						2,750	736.3	4.8	.....	19	1.63	wsw.	6.1	
P. M.														
2:35	995.9	17.5	46	ssw.	5.4	2,976	715.1	5.0	0.08	18	1.57	w.	4.6	
						2,750	735.2	5.6	.....	18	1.64	w.	5.3	
						2,500	757.5	6.2	.....	18	1.71	wsw.	6.2	
						2,250	781.2	6.9	.....	18	1.79	sw.	7.0	
						2,000	805.0	7.5	.....	18	1.87	sw.	7.8	
						1,750	829.9	8.2	.....	17	1.85	ssw.	8.6	
						1,500	855.3	8.8	.....	17	1.93	ssw.	9.4	
4:13	994.9	16.5	47	s.	6.3	1,286	877.2	9.4	0.39	17	2.00	s.	10.1	
						1,250	881.2	9.5	.....	18	2.14	s.	10.1	
						1,000	908.4	10.5	.....	23	2.92	s.	10.3	
						750	935.7	11.5	.....	27	3.66	s.	10.6	
4:25	994.8	16.2	49	s.	4.9	623	949.7	12.0	1.06	30	4.21	s.	10.7	
						500	963.8	13.3	.....	36	5.50	s.	8.9	
						250	993.0	16.0	.....	48	8.73	s.	5.2	
4:34	994.8	16.2	49	s.	4.9	233	994.8	16.2	.....	49	9.03	s.	4.9	Cloudless.

TABLE 6.—*Free-air data from kite flights at Broken Arrow Aerological Station, November, 1918*—Continued.

November 12, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:45	997.6	5.3	92	sse.	3.6	233	997.6	5.3	.....	92	8.20	sse.	3.6	3/10 Cl.St., nw.
						250	995.7	5.6	.....	91	8.28	s.	3.9	
						500	965.8	9.5	.....	71	8.43	sw.	7.8	
8:07	997.7	6.3	90	sse.	3.6	617	952.5	11.4	−1.59	62	8.36	wsw.	9.6	
						750	937.0	11.1	.....	61	8.06	wsw.	8.6	1/10 Cl.St., nw.
						1,000	909.7	10.5	.....	59	7.49	w.	6.8	
						1,250	883.3	10.0	.....	56	6.88	wnw.	5.0	
10:48	998.0	14.0	58	sw.	4.5	1,417	865.8	9.6	0.30	55	6.57	wnw.	3.8	1/10 Ci.St., nw.
						1,250	883.5	10.2	.....	56	6.97	wnw.	4.3	
10:58	998.0	14.5	60	sw.	4.0	1,003	910.2	11.2	−0.27	57	7.58	wnw.	5.1	
						750	938.0	10.5	.....	65	8.26	w.	5.2	
11:23	997.9	15.2	64	sw.	2.7	659	950.8	10.2	1.33	69	8.59	w.	5.2	
						500	966.3	12.0	.....	67	9.40	wsw.	4.5	
						250	995.7	15.4	.....	64	11.20	sw.	3.2	
11:32	997.8	15.6	64	sw.	3.1	233	997.8	15.6	.....	64	11.34	sw.	3.1	Few Cl.St., nw.

November 13, 1918.

P. M.														
4:02	989.9	19.8	52	s.	5.4	233	989.9	19.8	.....	52	12.01	s.	5.4	Cloudless.
						250	988.5	19.6	.....	52	11.86	s.	5.5	
						500	959.8	17.1	.....	54	10.53	ssw.	7.0	
4:20	989.9	19.3	57	s.	4.0	674	940.1	15.4	1.00	56	9.80	ssw.	8.0	
						750	931.5	14.7	.....	58	9.70	ssw.	8.1	
						1,000	904.0	12.6	.....	66	9.63	ssw.	8.3	
						1,250	877.3	10.4	.....	73	9.21	ssw.	8.6	
						1,500	851.5	8.2	.....	81	8.80	ssw.	8.8	
5:06	989.9	16.8	71	s.	4.5	1,564	844.8	7.6	0.88	83	8.67	ssw.	8.9	
						1,750	825.9	7.7	.....	77	8.09	ssw.	8.6	
5:26	989.9	16.1	72	s.	4.5	1,760	824.8	7.9	−0.15	69	7.35	sw.	8.2	
						2,000	801.0	6.9	.....	52	5.17	sw.	8.0	
						2,250	776.7	5.7	.....	34	3.11	wsw.	7.8	
5:59	989.9	15.4	73	s.	4.5	2,405	762.3	5.2	0.42	23	2.04	wsw.	7.7	
						2,500	753.5	4.8	.....	22	1.89	wsw.	7.5	
						2,750	731.0	3.8	.....	21	1.68	wsw.	7.1	
						3,000	708.8	2.9	.....	19	1.43	wsw.	6.7	
6:49	989.9	14.4	75	sse.	4.5	3,002	700.7	2.5	0.33	18	1.32	wsw.	6.5	
						3,000	708.8	2.7	.....	18	1.34	wsw.	6.8	
						2,750	731.0	3.4	.....	19	1.48	wsw.	7.8	
						2,500	753.5	4.1	.....	20	1.64	wsw.	8.8	
7:28	989.9	13.5	78	sse.	4.0	2,309	771.4	4.6	0.55	20	1.70	wsw.	9.5	
						2,250	776.7	4.9	.....	23	1.99	wsw.	9.3	
						2,000	801.0	6.3	.....	34	3.25	wsw.	8.3	
						1,750	825.9	7.7	.....	46	8.09	sw.	7.4	
7:43	989.9	13.1	78	sse.	4.0	1,578	843.3	8.6	0.07	54	6.03	sw.	6.7	
						1,500	851.0	8.6	.....	63	7.04	sw.	6.8	
7:57	989.9	13.2	77	s.	4.0	1,304	871.4	8.8	0.84	85	9.63	ssw.	7.1	
						1,250	876.8	9.2	.....	83	9.66	ssw.	7.3	
						1,000	903.3	11.3	.....	73	9.77	ssw.	8.4	
						750	930.9	13.4	.....	63	9.68	ssw.	9.4	
						500	958.9	15.5	.....	52	9.16	ssw.	10.5	
8:22	989.7	13.0	76	s.	4.5	492	959.9	15.6	−1.00	52	9.21	ssw.	10.5	
						250	987.7	13.2	.....	74	11.23	s.	4.9	
8:28	989.7	13.0	76	s.	4.5	233	989.7	13.0	.....	76	11.38	s.	4.5	Cloudless.

November 14, 1918.

A. M.														
7:41	987.9	9.0	76	s.	7.6	233	987.9	9.0	.....	76	8.72	s.	7.6	9/10 A.St., sw.
						250	986.0	9.2	.....	75	8.97	s.	8.2	
						500	956.5	11.9	.....	53	7.38	s.	17.3	
7:46	987.9	9.1	75	s.	7.2	657	939.0	13.6	−1.08	40	6.23	s.	23.0	
						750	928.5	13.1	.....	38	5.73	s.	22.5	
						1,000	901.3	11.9	.....	33	4.60	s.	21.0	
						1,250	874.9	10.6	.....	28	3.58	s.	19.6	
8:08	987.9	9.4	74	s.	6.7	1,357	863.7	10.1	0.50	26	3.21	s.	19.0	4/10 Cl.St., wsw.; 6/10 A.St., sw.
						1,500	848.8	9.1	.....	26	3.01	s.	19.0	
						1,750	823.7	7.4	.....	26	2.68	s.	19.1	
8:30	988.1	9.6	75	s.	6.3	1,972	801.8	5.8	0.70	26	2.40	s.	19.2	
						2,000	799.3	5.7	.....	26	2.38	s.	19.2	
						2,250	775.2	4.8	.....	22	1.89	s.	19.1	
						2,500	751.9	3.8	.....	18	1.44	ssw.	19.1	
9:03	998.2	10.5	74	s.	6.3	2,730	730.6	3.0	0.37	15	1.14	ssw.	19.0	5/10 Cl.St., wsw.; 4/10 A.St., sw.
						2,750	728.9	3.5	.....	15	1.18	ssw.	19.1	
9:12	998.2	10.9	71	s.	7.2	2,797	724.6	4.8	−2.69	15	1.29	ssw.	19.5	6/10 Cl.St., wsw.; 1/10 Cl.Cu., wsw.; 3/10 A.St., sw.
						3,000	706.0	2.1	.....	48	3.41	ssw.	20.7	
P. M.														
2:10	986.0	15.2	54	s.	8.9	3,247	684.1	−1.2	0.97	89	4.92	s.	22.2	3/10 Ci.St., wsw.; 6/10 A.St., sw.
						3,000	705.9	0.3	.....	76	4.74	s.	21.2	Altitude of a St. base about 3,000 m.
						2,750	727.8	1.8	.....	63	4.38	s.	20.1	
						2,500	750.0	3.4	.....	50	3.90	s.	19.0	Rain from 1:50 to 2:15 p. m.
2:50	985.4	14.8	56	s.	8.9	2,381	760.7	4.1	0.40	44	3.60	s.	18.5	
						2,250	773.0	4.6	.....	42	3.56	s.	18.9	
						2,000	797.1	5.6	.....	37	3.60	s.	19.7	
						1,750	821.6	6.6	.....	32	3.12	s.	20.4	
						1,500	846.9	7.6	.....	27	2.82	s.	21.2	
						1,250	873.0	8.6	.....	22	2.46	s.	22.0	
3:20	985.1	14.8	54	s.	8.0	1,183	879.4	8.9	0.63	21	2.30	s.	22.2	
						1,000	899.5	10.1	.....	28	3.46	s.	21.2	
						750	926.6	11.6	.....	38	5.19	s.	19.8	
3:51	984.9	14.8	53	s.	8.9	504	953.8	13.2	0.59	48	7.28	s.	18.5	
						250	983.0	14.7	.....	53	8.87	s.	9.5	
3:58	984.8	14.8	53	s.	8.9	233	984.8	14.8	.....	53	8.92	s.	8.9	10/10 A.St., sw.

TABLE 6.—*Free-air data from kite flights at Broken Arrow Aerological Station, November, 1918*—Continued.

November 18, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:12	990.7	5.4	54	nw.	10.7	233	990.7	5.4	.....	54	4.84	nw.	10.7	Cloudless.
						250	988.5	5.3	.....	54	4.81	nw.	11.0	
						500	958.3	3.4	.....	57	4.44	nw.	15.3	
8:22	990.9	5.6	57	nw.	8.9	680	937.9	2.1	0.74	59	4.19	nw.	18.5	
						750	929.7	1.6	.....	62	4.25	nw.	19.4	
8:46	991.1	6.0	55	nw.	10.7	978	904.0	0.1	0.69	71	4.37	nnw.	22.2	
						750	930.1	1.7	.....	65	4.49	nnw.	17.9	
9:18	991.4	6.6	54	nw.	13.4	543	954.4	3.2	1.16	59	4.54	nw.	13.9	
						500	959.3	3.7	.....	58	4.62	nw.	13.3	
						250	989.3	6.6	.....	52	5.06	nw.	13.4	
9:23	991.5	6.8	52	nw.	13.4	233	991.5	6.8	.....	52	5.14	nw.	13.4	Cloudless.

November 20, 1918.

A. M.														
7:57	989.2	4.0	91	n.	5.8	233	989.2	4.0	.....	91	7.40	n.	5.8	Few Ci., w.; 1/10 A.St., w.
						250	987.2	4.1	.....	90	7.37	n.	6.1	
						500	957.0	6.1	.....	74	6.97	nne.	10.0	
8:02	989.2	4.0	91	n.	6.3	665	938.4	7.4	−0.79	64	6.59	ne.	12.6	
						750	928.8	8.1	.....	50	5.40	ne.	10.2	
8:25	989.4	5.0	86	nne.	7.2	842	918.7	8.8	−0.79	35	3.97	ene.	7.6	
						1,000	902.2	8.4	.....	32	3.53	e.	6.4	Few Ci., w.; 2/10 St.Cu., sw.
11:09	990.9	9.3	76	nne.	7.6	1,046	897.8	8.3	0.23	31	3.39	e.	6.1	5/10 A.St., sw.; 4/10 St.Cu., sw.
						1,000	902.7	8.4	.....	31	3.42	e.	6.2	
11:17	990.9	9.1	76	nne.	8.5	855	918.7	8.7	−1.66	29	3.26	ene.	6.7	
						750	930.5	7.0	.....	57	5.71	ene.	7.6	
11:29	990.9	8.7	76	nne.	7.6	638	943.3	5.1	0.89	86	7.56	ne.	8.5	
						500	958.9	6.3	.....	83	7.93	ne.	8.3	
						250	988.9	8.5	.....	76	8.44	nne.	8.0	
11:37	990.9	8.7	76	nne.	8.0	233	990.9	8.7	.....	76	8.55	nne.	8.0	5/10 A.St., sw.; 5/10 St.Cu., sw.

November 21, 1918.

A. M.														
8:11	997.8	3.1	75	n.	5.8	233	997.8	3.1	.....	75	5.72	n.	5.8	10/10 St.Cu., n.
						250	995.8	2.9	.....	76	5.72	n.	5.8	
						500	965.2	0.5	.....	84	5.32	n.	6.2	
8:20	997.8	3.1	75	n.	7.2	550	959.1	−0.1	1.01	86	5.21	n.	6.3	
						750	935.4	−1.5	.....	87	4.68	n.	7.7	
						1,000	906.7	−3.3	.....	88	4.08	n.	9.4	
8:45	997.9	3.1	75	n.	7.2	1,145	890.0	−4.4	0.64	88	3.71	n.	10.4	
						1,000	906.7	−3.6	.....	88	3.98	n.	9.3	
						750	935.8	−2.2	.....	87	4.43	n.	7.5	
						500	965.4	−0.8	.....	87	4.97	n.	5.6	
9:35	998.2	3.3	77	n.	5.8	472	969.0	−0.6	1.63	87	5.05	n.	5.4	
						250	996.1	3.0	.....	78	5.91	n.	4.9	
9:41	998.3	3.3	77	n.	4.9	233	998.3	3.3	.....	77	5.96	n.	4.9	10/10 St.Cu., n.

November 22, 1918.

A. M.														
8:17	1,001.6	1.0	84	nne.	7.2	233	1,001.6	1.0	.....	84	5.52	nne.	7.2	10/10 St., nne
						250	999.6	0.8	.....	84	5.43	nne.	7.4	Light snow from 7:50 to 8:20 a. m.
						500	968.7	−2.2	.....	85	4.33	nne.	10.5	
8:25	1,001.7	1.1	84	nne.	7.2	650	950.7	−4.1	1.22	86	3.72	nne.	12.4	
						750	938.5	−4.7	.....	86	3.54	nne.	12.3	
						1,000	909.3	−6.1	.....	89	3.25	nne.	11.8	
						1,250	881.0	−7.5	.....	91	2.94	nne.	11.4	Altitude of St. base about 1,350 m.
8:41	1,001.9	1.2	79	nne.	7.2	1,420	861.7	−8.5	0.58	93	2.75	nne.	11.1	
						1,250	881.0	−7.5	.....	93	3.00	nne.	10.6	5/10 St.Cu., nne.
						1,000	909.8	−6.0	.....	93	3.42	nne.	9.7	5/10 St., nne.
9:19	1,002.3	1.7	75	nne.	8.9	901	921.6	−5.4	0.89	93	3.61	nne.	9.3	
						750	939.2	−4.1	.....	91	3.94	nne.	8.9	
9:30	1,002.5	1.7	75	nne.	8.9	574	960.6	−2.5	1.26	89	4.41	nne.	8.5	
						500	969.5	−1.6	.....	86	4.60	nne.	8.6	
						250	1,000.5	1.6	.....	75	5.14	nne.	8.9	
9:36	1,002.5	1.8	74	nne.	8.9	233	1,002.5	1.8	.....	74	5.15	nne.	8.9	10/10 St.Cu., nne.

November 23, 1918.

A. M.														
7:54	1,004.5	−0.4	89	n.	5.4	233	1,004.5	−0.4	.....	89	5.26	n.	5.4	10/10 St.Cu., nne.
						250	1,002.4	−0.5	.....	89	5.22	n.	5.7	
						500	971.4	−2.5	.....	92	4.56	nne.	9.5	
8:13	1,004.5	−0.2	85	nne.	6.3	633	953.2	−3.6	0.80	94	4.25	nne.	11.5	
						750	941.0	−4.5	.....	90	3.77	nne.	10.9	Altitude of St.Cu. base about 750 m.
						1,000	911.5	−6.4	.....	83	2.95	ne.	9.7	
8:50	1,004.5	0.0	83	nne.	7.6	1,088	901.6	−7.1	0.77	80	2.68	ne.	9.3	
						1,250	883.0	−8.3	.....	88	2.66	ne.	8.3	
9:31	1,004.5	0.0	82	nne.	5.8	1,433	862.1	−9.6	0.66	96	2.58	ne.	7.2	Light snow (moist) began at 9:08 a. m. and continued during flight.
						1,250	882.2	−8.5	.....	96	2.84	ne.	7.9	
9:41	1,004.5	0.0	81	nne.	6.7	1,061	903.2	−7.4	0.67	95	3.10	ne.	8.6	
						1,000	910.4	−7.0	.....	95	3.21	ne.	8.4	Altitude of St.Cu. base about 800 m.
						750	940.0	−5.3	.....	95	3.71	ne.	7.8	
						500	971.0	−3.6	.....	95	4.29	nne.	7.1	
9:58	1,004.5	0.0	82	nne.	5.8	468	975.2	−3.4	1.53	95	4.37	nne.	7.0	
						250	1,002.4	−0.1	.....	82	4.97	nne.	5.9	
10:05	1,004.5	0.2	81	nne.	5.8	233	1,004.5	0.2	.....	81	5.02	nne.	5.8	10/10 St.Cu., ne.

TABLE 6.—*Free air data from kite flights at Broken Arrow Aerological Station, November, 1918*—Continued.

November 25, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
9:22	993.6	−1.0	100	ne.	6.3	233	993.6	−1.0	.....	100	5.62	ne.	6.3	10/10 St., ne.
						250	991.5	−1.1	.....	100	5.57	ne.	6.4	
						500	960.4	−2.4	.....	99	4.95	ene.	8.3	Altitude of St. base about 300 m.
9:34	993.5	−0.9	97	ne.	5.8	593	949.6	−2.9	0.53	99	4.75	ene.	9.0	
						750	930.6	−3.8	.....	99	4.59	ene.	8.9	
						1,000	901.8	−4.0	.....	99	4.33	ene.	8.6	Light snow (moist) at beginning of flight,
10:30	993.3	−0.6	92	ne.	6.7	1,022	899.2	−4.1	0.54	99	4.29	ene.	8.6	ended at 10:00 a. m.
						1,000	901.8	−4.0	.....	99	4.33	ene.	8.6	
						750	930.6	−3.3	.....	98	4.55	ne.	9.2	
10:49	993.1	−0.2	92	ne.	6.7	534	956.3	−2.6	0.80	98	4.82	ne.	9.7	
						500	960.4	−2.3	.....	97	4.89	ne.	9.4	
						250	991.3	−0.3	.....	92	5.48	ne.	6.9	
10:55	993.0	−0.2	92	ne.	6.7	233	993.0	−0.2	.....	92	5.53	ne.	6.7	10/10 St., ne.

November 26, 1918.

A. M.														
8:14	996.7	0.9	80	n.	5.8	233	996.7	0.9	.....	80	5.22	n.	5.8	10/10 St.Cu., sw.
						250	994.7	0.8	.....	79	5.11	n.	5.9	
						500	963.8	−0.5	.....	72	4.22	nne.	6.8	
8:58	996.7	1.2	73	nne.	6.3	718	938.1	−1.7	0.54	65	3.44	ne.	7.6	
						750	934.3	−1.8	.....	66	3.47	ne.	7.7	9/10 St.Cu., sw.
						1,000	905.3	−2.2	.....	74	3.77	ene.	8.1	
9:42	996.4	1.7	72	nne.	5.8	1,238	878.4	−2.7	0.19	81	3.95	ene.	8.6	
						1,250	877.2	−2.6	.....	82	4.03	ene.	8.5	
9:45	996.4	1.7	72	nne.	5.8	1,384	862.6	−0.9	−1.10	88	4.99	ene.	7.7	
						1,250	877.2	−2.2	.....	75	3.82	ene.	8.8	
9:55	996.3	1.9	69	nne.	5.4	1,209	881.6	−2.6	0.27	71	3.49	ene.	9.2	3/10 A.Cu., sw.; 5/10 St.Cu., sw.
						1,000	905.3	−2.0	.....	70	3.62	ene.	9.8	
10:12	996.2	2.3	62	nne.	5.8	912	915.2	−1.8	0.22	69	3.63	ene.	10.0	
						750	934.0	−1.4	.....	71	3.86	ne.	8.4	
10:23	996.2	2.6	59	nne.	5.8	590	952.9	−1.1	1.04	74	4.12	ne.	6.7	7/10 A.Cu., sw.; 1/10 St.Cu., sw.
						500	963.8	−0.2	.....	71	4.27	ne.	6.5	
						250	994.1	2.4	.....	63	4.57	nne.	5.9	
10:34	996.1	2.6	62	nne.	5.8	233	996.1	2.6	.....	62	4.57	nne.	5.8	3/10 A.Cu., sw.; 5/10 St.Cu., sw.

November 27, 1918.

A. M.														
8:05	987.1	4.4	68	sse.	3.6	233	987.1	4.4	.....	68	5.69	sse.	3.6	10/10 St., se.
						250	984.8	4.4	.....	68	5.69	sse.	3.9	
						500	955.3	3.7	.....	60	4.78	sse.	8.7	
8:09	987.1	4.3	70	sse.	3.6	579	946.0	3.5	0.26	58	4.55	sse.	10.2	
						750	926.0	3.1	.....	81	6.18	se.	9.2	
8:48	986.6	4.5	68	se.	3.1	817	918.3	2.9	0.16	91	6.85	ese.	8.8	Altitude of St. base about 800 m.
						750	926.0	3.0	.....	86	6.52	ese.	9.0	
						500	954.7	3.3	.....	65	5.03	se.	10.0	
9:09	986.4	4.7	67	se.	3.1	391	967.4	3.4	0.82	56	4.37	se.	10.4	
						250	984.0	4.6	.....	66	5.60	se.	3.9	
9:11	986.3	4.7	67	se.	3.1	233	986.3	4.7	.....	67	5.72	se.	3.1	10/10 St., se.

November 29, 1918.

A. M.														
9:47	993.0	3.7	67	wnw.	4.9	233	993.0	3.7	.....	67	5.33	wnw.	4.9	Few Ci.St., w.
						250	990.8	3.8	.....	65	5.21	wnw.	5.2	
						500	960.7	5.1	.....	30	2.64	nw.	9.2	
9:54	993.0	4.0	66	wnw.	5.4	539	956.3	5.3	−0.52	25	2.23	nw.	9.8	
						750	931.6	3.8	.....	25	2.00	nw.	8.4	
						1,000	903.5	1.9	.....	25	1.75	nw.	6.8	1/10 Ci.St., w.
11:06	993.0	6.4	56	wnw.	4.5	1,125	889.8	1.0	0.72	25	1.64	nw.	6.0	
						1,000	903.9	1.9	.....	24	1.68	nw.	5.9	
						750	932.5	3.6	.....	23	1.82	wnw.	5.6	
11:26	993.0	7.0	52	w.	4.0	641	944.8	4.4	0.81	22	1.84	wnw.	5.5	
						500	961.1	5.5	.....	31	2.80	wnw.	5.0	
						250	990.8	7.6	.....	48	5.01	wnw.	4.1	
11:33	993.0	7.7	49	wnw.	4.0	233	993.0	7.7	.....	49	5.15	wnw.	4.0	Few Ci.St., w.

TABLE 7.—*Free-air data from kite flights at Broken Arrow Aerological Station, December, 1918.*

December 4, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:46	993.7	19.2	44	ssw.	8.9	233	993.7	19.2	.....	44	9.79	ssw.	8.9	4/10 Ci., nw.
						250	991.8	19.1	.....	44	9.73	ssw.	9.0	
						500	963.0	17.0	.....	40	7.75	sw.	10.9	
2:56	993.6	19.4	44	ssw.	7.2	614	950.2	16.0	0.84	39	7.09	sw.	11.8	2/10 Ci., nw.
						750	935.0	15.6	.....	36	6.38	sw.	13.2	
						1,000	907.6	14.8	.....	31	5.22	wsw.	15.8	
						1,250	881.2	14.0	.....	26	4.15	w.	18.3	
3:41	993.2	19.3	42	sw.	6.3	1,372	868.4	13.6	0.36	23	3.58	w.	19.6	
						1,250	881.2	14.1	.....	25	4.02	w.	18.8	
						1,000	907.6	15.1	.....	30	5.15	wsw.	17.1	
						750	935.0	16.1	.....	35	6.41	sw.	15.4	
4:10	993.0	18.6	46	sw.	5.8	670	943.6	16.4	0.46	36	6.71	sw.	14.8	
						500	963.0	17.2	.....	40	7.85	sw.	11.5	
						250	991.6	18.3	.....	46	9.67	sw.	6.6	
4:18	993.0	18.4	47	sw.	6.3	233	993.0	18.4	.....	47	9.95	sw.	6.3	3/10 Ci., nw.

December 5, 1918.

A. M.														
8:05	990.2	7.0	83	ssw.	2.7	233	990.2	7.0	.....	83	8.32	ssw.	2.7	3/10 Ci.St., wnw.
						250	988.2	7.6	.....	79	8.25	ssw.	3.7	
8:08	990.2	7.1	83	ssw.	2.7	470	962.5	15.5	−3.59	33	5.81	sw.	16.5	
						500	959.0	15.6	.....	31	5.49	sw.	16.0	
8:20	990.2	7.8	77	ssw.	2.7	736	933.0	16.4	−0.34	18	3.36	sw.	11.9	
						750	931.3	16.3	.....	18	3.34	sw.	12.1	3/10 Ci.St., wnw.
						1,000	904.4	15.8	.....	17	3.05	sw.	13.0	
9:41	990.2	12.1	67	s.	2.7	1,245	878.7	15.3	0.48	16	2.78	sw.	14.0	
						1,000	904.4	17.1	.....	16	3.12	sw.	14.7	
10:17	990.1	13.1	63	s.	2.7	959	908.8	17.4	−0.67	16	3.18	sw.	14.8	
						750	931.3	16.0	.....	18	3.27	sw.	14.5	
10:48	990.0	13.8	59	s.	2.7	543	954.2	14.6	−0.06	21	3.49	sw.	14.2	6/10 Ci.St., w.
						500	959.0	14.6	.....	26	4.32	sw.	12.8	
						250	988.0	14.4	.....	58	9.51	s.	4.8	
11:00	989.9	14.4	60	s.	4.5	233	989.9	14.4	.....	60	9.84	s.	4.5	7/10 Ci.St., w.

December 6, 1918.

P. M.														
1:25	991.0	16.6	55	se.	4.9	233	991.0	16.6	.....	55	10.39	se.	4.9	3/10 Ci.St., w.; 4/10 A.St., w.
						250	989.0	16.5	.....	55	10.32	se.	5.0	
						500	960.0	14.4	.....	56	9.18	sse.	7.2	
1:50	990.7	16.5	53	se.	6.7	602	948.5	13.5	0.84	56	8.66	sse.	8.1	
						750	931.8	12.6	.....	60	8.75	s.	9.0	
						1,000	904.0	11.1	.....	66	8.72	ssw.	10.6	
2:38	990.0	17.6	54	sc.	6.7	1,053	893.3	10.8	0.60	67	8.68	ssw.	10.9	
						1,250	877.4	12.6	.....	45	6.57	ssw.	12.7	
3:06	989.5	17.8	53	sse.	6.7	1,411	860.5	14.0	−0.27	26	4.15	ssw.	14.1	5/10 Ci.St., w.; 2/10 A.St., w.
						1,250	877.2	14.6	.....	26	4.32	ssw.	14.5	
3:22	989.3	18.0	51	sse.	7.2	1,123	890.4	15.0	−1.80	27	4.60	ssw.	14.9	
						1,000	903.6	12.8	.....	34	5.03	ssw.	13.9	
3:24	989.3	18.0	51	sse.	7.2	945	909.5	11.8	0.92	37	5.12	ssw.	13.4	
						750	930.8	13.6	.....	49	7.63	s.	13.5	
3:35	989.2	17.6	54	sse.	8.9	650	941.9	14.5	−0.70	56	9.25	s.	13.6	
						500	958.7	15.5	.....	55	9.09	s.	11.9	
						250	987.3	17.3	.....	53	10.47	s.	9.1	
3:41	989.1	17.4	53	s.	8.9	233	989.1	17.4	.....	53	10.53	s.	8.9	5/10 Ci.St., w.

December 7, 1918.

A. M.														
9:09	986.6	13.8	84	ssw.	13.4	233	986.6	13.8	.....	84	13.26	ssw.	13.4	2/10 A.Cu., nw.
9:15	986.6	13.9	83	ssw.	12.1	250	984.8	13.6	.....	84	13.09	ssw.	13.8	
						456	960.9	11.6	0.99	87	11.88	sw.	19.2	
						500	955.7	11.9	.....	82	11.42	sw.	19.3	
						750	927.8	13.9	.....	52	8.26	sw.	19.7	
						1,000	900.8	15.5	.....	22	3.87	sw.	20.2	
9:35	986.7	14.7	80	ssw.	11.6	1,017	899.0	15.6	−0.38	20	3.54	sw.	20.2	Few Ci.St., nw.; few Ci.Cu., nw.
						1,000	900.8	15.6	.....	21	3.72	sw.	20.1	
9:50	986.9	15.3	80	ssw.	11.6	796	923.1	15.5	−3.39	36	6.34	sw.	18.5	
						750	928.2	13.9	.....	55	8.73	sw.	16.8	
10:07	986.9	15.4	77	ssw.	11.6	678	936.1	11.5	0.14	86	11.67	sw.	14.1	3/10 Ci.St., nw.; few St.Cu., ssw.
10:18	986.9	15.6	77	ssw.	11.6	532	952.6	11.7	1.40	90	12.38	sw.	14.8	
						500	956.1	12.1	.....	89	12.57	sw.	14.8	
						250	984.9	15.7	.....	78	13.92	ssw.	15.2	
10:32	986.9	15.9	77	ssw.	15.2	233	986.9	15.9	.....	77	13.91	ssw.	15.2	2/10 Ci.St., nw.; few St.Cu., ssw.

TABLE 7.—*Free-air data from kite flights at Broken Arrow Aerological Station, December, 1918*—Continued.

December 9, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:05	981.4	14.4	60	sw.	4.5	233	981.4	14.4	.....	60	9.84	sw.	4.5	Few A.St., wsw.; few St.Cu., ssw.
						250	979.5	14.4	.....	58	9.51	sw.	4.7	
						500	950.9	14.6	.....	29	4.82	w.	7.8	
10:07	981.4	15.0	53	sw.	4.5	514	949.3	14.6	−0.07	27	4.49	w.	8.0	
10:38	981.2	16.2	47	sw.	4.9	751	922.9	13.4	0.38	20	3.07	wsw.	5.3	
						800	950.5	14.0	.....	32	5.11	w.	5.8	
10:47	981.2	16.8	46	w.	4.0	380	964.3	14.3	1.77	37	6.03	w.	6.0	
						250	979.4	16.6	.....	42	7.93	w.	4.7	
11:01	981.1	16.9	43	w.	4.5	233	981.1	16.9	.....	43	8.28	w.	4.5	Few Ci.St., wsw.; few St.Cu., ssw.

December 10, 1918.

A. M.														
9:30	983.6	9.4	61	w.	6.3	233	983.6	9.4	.....	61	7.19	w.	6.3	Few Ci.St., wsw.
						250	981.6	9.3	.....	61	7.15	w.	6.4	
						500	952.6	7.9	.....	62	6.60	wnw.	8.2	
9:40	983.9	9.6	62	wnw.	6.3	587	942.8	7.4	0.56	62	6.39	wnw.	8.9	
						750	924.0	8.3	.....	57	6.24	nw.	9.9	
						1,000	896.9	9.6	.....	49	5.86	nnw.	11.4	
10:14	984.7	10.6	60	nw.	10.3	1,139	882.9	10.4	−0.54	44	5.55	n.	12.3	
						1,250	871.6	9.5	.....	45	5.34	n.	12.4	
10:32	985.0	10.7	61	nw.	8.9	1,261	870.3	9.4	0.54	45	5.31	n.	12.4	
						1,250	871.7	9.4	.....	45	5.31	n.	12.5	
						1,000	898.8	10.1	.....	47	5.81	n.	13.8	
11:10	985.5	12.0	68	nnw.	10.3	896	910.2	10.4	0.37	48	6.05	n.	14.4	
						750	926.0	10.9	.....	46	6.00	n.	15.9	
11:25	985.6	12.5	56	nw.	8.9	546	949.4	11.7	−3.62	43	5.91	n.	18.0	
						500	954.5	10.0	.....	47	5.77	n.	14.7	
11:28	985.6	12.8	56	nw.	10.7	488	956.0	9.6	1.41	48	5.74	n.	13.8	
						250	983.8	12.9	.....	56	8.33	nnw.	10.9	
11:33	985.7	13.2	57	nnw.	10.7	233	985.7	13.2	.....	57	8.65	nnw.	10.7	Few Ci.St., wsw.

December 11, 1918.

A. M.														
8:44	996.6	3.0	86	ne.	2.2	233	996.6	3.0	.....	86	6.52	ne.	2.2	Few Ci., wsw.; few Ci.St., wsw.
						250	994.4	3.1	.....	83	6.33	ne.	2.3	
						500	964.5	4.4	.....	44	3.68	nw.	6.2	
9:06	996.7	4.5	85	ne.	1.8	644	947.8	5.2	−0.54	20	1.77	w.	8.4	
						750	935.4	4.8	.....	20	1.72	nw.	8.7	
9:32	996.9	5.5	80	ne.	2.2	984	909.2	3.8	0.41	21	1.68	ene.	9.5	
						1,000	907.4	3.9	.....	21	1.70	ene.	9.1	
10:23	996.9	7.7	71	e.	2.0	1,130	893.4	4.8	−0.25	*18	1.55	e.	5.5	
						1,000	907.4	5.0	.....	*18	1.57	e.	5.8	
						750	935.4	5.5	.....	*18	1.63	e.	6.3	
10:43	996.8	8.0	63	ene.	2.4	548	959.3	5.9	0.67	*18	1.67	e.	6.7	
						500	964.5	6.2	.....	25	2.37	e.	6.4	
						250	994.4	7.9	.....	60	6.39	ne.	4.6	
10:49	996.8	8.0	63	ne.	4.5	233	996.8	8.0	.....	63	6.76	ne.	4.5	Few Ci.St., wsw.

December 14, 1918.

A. M.														
9:10	992.1	4.4	68	nw.	6.7	233	992.1	4.4	.....	68	5.69	nw.	6.7	Few Ci.St., along e. horizon.
						250	990.0	4.5	.....	66	5.56	nw.	7.1	
9:12	992.1	4.5	67	nw.	6.7	498	960.5	6.4	−0.75	29	2.79	nnw.	12.3	
						750	930.7	5.5	.....	29	2.62	nnw.	13.4	
						1,000	903.1	4.6	.....	30	2.54	n.	14.5	
9:40	992.6	5.6	65	nw.	7.2	1,244	877.0	3.8	0.35	30	2.41	n.	15.5	
						1,250	876.5	3.7	.....	30	2.39	n.	15.5	
						1,500	850.0	1.6	.....	37	2.54	n.	14.2	
10:43	993.0	7.0	62	nnw.	6.7	1,659	833.4	0.2	0.72	42	2.60	n.	13.4	
						1,500	850.0	1.1	.....	40	2.65	n.	13.0	
						1,250	876.5	2.6	.....	36	2.65	n.	12.2	
						1,000	903.9	4.1	.....	32	2.62	n.	11.5	
						750	932.0	5.5	.....	28	2.53	n.	10.8	
11:34	992.8	8.0	57	nnw.	5.8	615	947.4	6.1	−0.86	27	2.54	n.	10.5	
						500	961.0	5.1	.....	29	2.55	n.	8.4	
11:36	992.8	8.1	57	nnw.	5.8	476	963.8	4.9	1.40	30	2.60	n.	8.0	
						250	990.6	8.1	.....	54	5.83	nnw.	5.1	
11:41	992.7	8.3	56	nnw.	4.9	233	992.7	8.3	.....	56	6.13	nnw.	4.9	Cloudless.

*Relative humidity below 18 per cent.

TABLE 7.—*Free-air data from kite flights at Broken Arrow Aerological Station, December, 1918*—Continued.

December 16, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:36	999.0	6.9	69	sse.	5.4	233	999.0	6.9	.....	69	6.87	sse.	5.4	8/10 Cl.St., wsw.
						250	997.0	7.0	.....	67	6.71	sse.	5.8	
						500	967.3	8.3	.....	45	4.93	s.	12.5	
9:44	999.1	7.5	66	sse.	7.2	608	954.8	8.8	−0.50	35	3.97	s.	15.3	2/10 Ci., wsw.; 6/10 Cl.St., wsw.
						750	938.4	8.3	.....	30	3.28	s.	13.7	
						1,000	910.8	7.4	.....	22	2.27	s.	10.9	3/10 Ci., wsw.; 2/10 Cl.St., wsw.
10:42	999.1	9.4	62	sse.	6.7	1,082	901.4	7.1	0.28	19	1.92	s.	10.0	
						1,000	910.8	7.3	.....	20	2.05	s.	11.0	
						750	938.4	7.8	.....	25	2.64	s.	14.2	
11:04	999.0	10.2	59	s.	8.9	579	958.0	8.1	0.78	28	3.02	s.	16.4	
						500	967.3	8.7	.....	35	3.94	s.	14.4	
						250	997.0	10.7	.....	58	7.46	s.	8.0	
11:11	998.9	10.8	60	s.	7.6	233	998.9	10.8	.....	60	7.77	s.	7.6	2/10 Cl.St., sw.

December 18, 1918.

A. M.														
8:38	995.0	8.4	91	sse.	5.8	233	995.0	8.4	.....	91	10.03	sse.	5.8	10/10 St., ssw.
						250	993.0	8.4	.....	90	9.92	sse.	6.2	
						500	963.8	8.5	.....	81	8.99	s.	11.5	
8:50	995.2	8.5	89	sse.	6.7	679	943.1	8.5	−0.02	75	8.32	s.	15.4	
						750	935.3	8.2	.....	80	8.70	s.	15.9	
						1,000	907.4	7.1	.....	98	9.89	ssw.	17.7	
9:00	995.3	8.8	88	sse.	6.7	1,010	906.0	7.1	0.42	99	9.99	ssw.	17.8	
						1,000	907.4	7.1	.....	98	9.89	ssw.	17.7	
						750	935.3	8.3	.....	82	8.98	s.	15.4	
10:07	995.7	9.1	84	sse.	7.2	625	949.7	8.7	0.13	74	8.32	s.	14.2	
						500	963.8	8.9	.....	78	8.89	s.	12.0	
						250	993.2	9.2	.....	85	9.89	sse.	7.5	
10:14	995.7	9.2	86	sse.	7.2	233	995.7	9.2	.....	86	10.01	sse.	7.2	10/10 St.Cu., s.

December 19, 1918.

A. M.														
8:50	993.5	8.0	91	ese.	4.5	233	993.5	8.0	.....	91	9.76	ese.	4.5	10/10 St., se.
						250	991.6	8.0	.....	91	9.76	ese.	4.9	
						500	962.0	7.4	.....	86	8.86	se.	10.8	
8:54	993.6	8.0	91	ese.	4.5	523	959.3	7.3	0.24	86	8.80	se.	11.3	
						750	933.5	7.6	.....	83	8.67	sse.	9.6	
9:35	993.6	8.4	90	ese.	4.5	882	918.6	7.8	0.10	81	8.57	sse.	8.6	
						750	933.5	8.2	.....	78	8.48	sse.	9.4	
9:52	993.6	8.8	89	se.	4.0	580	952.8	8.8	0.03	74	8.38	sse.	10.5	
						500	962.0	8.8	.....	77	8.72	sse.	9.1	
						250	991.6	8.9	.....	87	9.92	se.	4.8	
9:59	993.6	8.9	88	se.	4.5	233	993.6	8.9	.....	88	10.03	se.	4.5	5/10 A St., se.; 5/10 St., se.

December 20, 1918.

A. M.														
9:28	982.6	8.9	94	s	6.7	233	982.6	8.9	.....	94	10.72	s.	6.7	10/10 St., se.
						250	980.7	8.8	.....	94	10.65	s	6.9	
						500	951.7	7.7	.....	95	9.98	s.	9 9	
9:40	982.9	9.0	98	s.	6.7	661	933.3	6.9	0.47	96	9.55	s.	11.9	Altitude of St. base about 450 m.
						750	923.7	7.2	.....	98	9.45	s.	13.4	
						1,000	896.4	8.1	.....	83	8.96	s.	17.6	
10:08	983.5	9.1	98	s.	9.4	1,030	893.1	8.2	0.03	82	8.91	s.	18.1	
						1,000	896.4	8.3	.....	84	9 20	s.	18.1	
10:17	983 5	9.2	98	s.	8.9	812	917.1	9.1	−0.41	94	10.87	s.	17.8	
						750	923.9	8.8	.....	94	10.65	s.	17.3	
11:32	983.5	9.3	96	sse.	9.4	522	949.7	7.9	0.48	96	10.22	sse.	15.5	
						500	952.4	8.0	.....	96	10.30	sse.	15.0	
						250	981.5	9.2	.....	96	11.17	sse.	9.8	
11:37	983.5	9.3	96	sse.	9.4	233	983.5	9.3	.....	96	11.25	sse.	9.4	10/10 St., sse.

December 24, 1918.

A. M.														
10:25	992.8	−5.8	87	nnw.	10.7	233	992.8	− 5.8	.....	87	3.26	nnw.	10.7	10/10 St., nnw.
						250	990.6	− 5.9	.....	87	3.23	nnw.	10.8	
						500	959.3	− 7.9	.....	92	2.87	nnw.	12.8	
						750	929.5	− 9.8	.....	98	2.64	n.	14.7	
10:50	993.4	−5.8	85	nnw.	10.7	868	915.4	−10.7	0.77	100	2.44	n.	15.6	
10:53	993.4	−5.9	88	nnw.	10.3	922	909.0	− 9.1	−2.96	100	2.81	n.	15.6	Altitude of St. base about 850 m.
						1,000	900.2	− 8.6	.....	100	2.94	nnw.	14.6	
11:37	994.0	−5.8	88	nnw.	9.4	1,063	893.2	− 8.2	−0.32	100	3.04	nnw.	13.8	
						1,000	900.3	− 8.2	.....	100	3.04	nnw.	13.7	7/10 St.Cu., nnw.; 3/10 St., nnw.
11:50	994.2	−5.5	86	nnw.	9.4	943	907.4	− 8.2	−1.02	100	3.04	nnw.	13.6	
						750	930.5	−10.2	.....	100	2.55	nnw.	13.6	
11:53	994.2	−5.6	87	nnw.	9.4	727	933.1	−10.4	0.90	100	2.51	nnw.	13.6	
P. M.														
12:02	994.3	−5.7	87	nnw.	8.9	503	949.3	− 9.2	1.03	100	2.79	nnw.	13.6	
						500	961.0	− 8.2	.....	97	2.95	nnw.	12.4	
						250	992.3	− 5.7	.....	89	3.36	nnw.	9.1	
12:07	994.3	−5.5	88	nnw.	8.9	233	994.3	− 5.5	.....	88	3.38	nnw.	8.9	6/10 St. Cu., nnw.; 4/10 St., nnw.

TABLE 7.—*Free-air data from kite flights at Broken Arrow Aerological Station, December, 1918*—Continued.

December 27, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:43	992.4	−5.0	76	wnw.	5.8	233	992.4	−5.0		76	3.05	wnw.	5.8	Cloudless.
						250	990.9	−5.1		77	3.06	wnw.	6.0	
8:51	992.5	−4.9	78	wnw.	5.8	383	973.6	−5.5	0.33	86	3.30	wnw.	7.7	
						500	959.3	−3.6		73	3.30	w.	8.4	
9:02	992.6	−4.3	80	w.	4.9	506	958.7	−3.5	−0.16	72	3.28	w.	8.4	
						750	929.4	−4.4		69	2.91	wnw.	8.9	
						1,000	900.6	−5.2		66	2.60	wnw.	9.5	
11:15	993.6	−2.7	77	w.	5.4	1,250	872.7	−6.1		62	2.26	nw.	10.0	
						1,364	860.7	−6.5	0.34	61	2.15	nw.	10.3	
						1,250	873.4	−6.1		64	2.34	nw.	10.3	
						1,000	901.7	−5.3		69	2.70	nw.	10.2	
						750	930.8	−4.4		75	3.16	nw.	10.1	
11:47	993.6	−2.0	75	w.	5.4	626	945.5	−4.0	0.51	78	3.41	nw.	10.1	
						500	960.8	−3.4		76	3.50	wnw.	9.0	
						250	991.7	−2.1		75	3.85	w.	6.9	
11:53	993.6	−2.0	75	w.	6.7	233	993.6	−2.0		75	3.88	w.	6.7	Cloudless.

December 28, 1918.

A. M.														
9:15	995.1	−3.8	86	w.	7.6	233	995.1	−3.8		86	3.82	w.	7.6	Cloudless.
						250	993.4	−3.9		86	3.79	w.	7.9	
						500	961.7	−6.0		90	3.31	w.	12.5	
9:22	995.1	−3.8	82	w.	7.6	628	946.2	−7.1	0.84	92	3.08	w.	14.8	
						750	931.8	−8.3		78	3.02	wnw.	16.4	
9:37	995.2	−2.6	78	w.	7.6	909	913.6	1.7	−3.18	59	4.08	nnw.	18.5	
						1,000	903.4	1.6		53	3.64	nnw.	18.6	
						1,250	875.9	1.5		36	2.45	n.	19.0	
10:20	995.6	−2.4	72	wnw.	7.6	1,485	850.4	1.3	−0.23	20	1.34	n.	19.3	Few Cl.St., nw.
						1,250	876.9	0.1		28	1.72	n.	18.1	
11:30	996.3	−1.0	72	nnw.	8.0	1,107	892.8	−0.7	−0.12	33	1.90	n.	16.6	
						1,000	905.0	−0.8		55	3.14	nnw.	15.1	
P. M.														
1:08	996.0	0.0	78	nnw.	4.9	933	912.0	−0.9	−1.17	60	3.91	nnw.	14.2	
						750	933.3	−3.0		87	4.13	nw.	9.0	
1:21	995.9	0.0	78	nnw.	5.4	626	947.8	−4.5	1.25	90	4.15	nw.	5.4	
						500	962.6	−2.9		92	4.42	nw.	5.1	
						250	993.6	0.2		79	4.90	nnw.	4.5	
1:28	995.9	0.4	78	nnw.	4.5	233	995.9	0.4		78	4.91	nnw.	4.5	Few St.Cu., nw.

December 30, 1918.

A. M.														
8:42	981.9	7.3	91	ssw.	8.0	233	981.9	7.3		91	9.31	ssw.	8.0	4/10 Ci.Cu., ssw.; 2/10 Ci.St., ssw.
						250	980.0	7.3		91	9.31	ssw.	8.6	
						500	950.5	7.0		90	8.02	ssw.	16.6	
8:49	982.0	7.4	92	ssw.	8.5	646	933.5	6.8	0.12	89	8.79	ssw.	21.3	1/10 Ci.Sw.; 2/10 Ci.St., ssw.
						750	922.0	6.7		79	7.75	ssw.	20.1	
9:04	982.1	7.0	92	ssw.	8.0	942	901.0	6.6	0.07	62	6.04	ssw.	18.0	
						1,000	894.8	7.1		54	5.45	ssw.	17.6	
10:10	983.0	9.6	84	ssw.	9.8	1,247	869.1	9.3	−1.02	21	2.46	ssw.	15.7	2/10 Ci.St., ssw.
						1,000	896.1	7.4		69	7.11	sw.	18.4	1/10 Ci.St., ssw.; few St.Cu., sw.
10:52	983.4	10.4	77	sw.	11.2	896	907.5	5.2	0.43	89	7.88	sw.	19.5	
						750	924.0	5.8		91	8.39	sw.	17.0	
11:04	983.5	10.2	77	sw.	10.3	591	941.8	6.5	0.98	93	9.00	sw.	14.3	
						500	952.4	7.4		90	9.27	sw.	13.7	
						250	982.0	9.8		82	9.94	sw.	12.2	
11:12	983.6	10.0	81	sw.	12.1	233	983.6	10.0		81	9.95	sw.	12.1	2/10 Ci.St., sw.; 4/10 St.Cu., sw.

December 31, 1918.

P. M.														
2:14	984.0	−4.0	91	n.	8.0	233	984.0	−4.0		91	3.98	n.	8.0	10/10 St., n.
						250	981.8	−4.1		91	3.94	n.	8.2	
						500	951.0	−6.3		95	3.41	n.	10.7	
2:22	984.0	−4.0	88	n.	8.5	679	929.7	−7.8	0.85	98	3.09	n.	12.5	Altitude of St. base about 750 m.
						750	921.3	−6.9		97	3.31	n.	10.8	
2:32	983.9	−4.2	91	n.	8.0	815	913.5	−6.0	−0.80	96	3.53	n.	9.2	
						750	921.3	−6.2		96	3.48	n.	9.0	
						500	951.0	−6.9		96	3.27	n.	8.3	
3:06	983.8	−4.4	96	n.	8.0	470	954.5	−7.0	1.01	96	3.24	n.	8.2	
						250	981.7	−4.8		95	3.88	n.	8.0	
3:19	983.6	−4.6	95	n.	8.0	233	983.6	−4.6		95	3.94	n.	8.0	10/10 St., n.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918.*

October 3, 1918 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.			
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*		
6:29	978.9	8.0	74	e.	4.5	396	978.9	8.0	.....	74	7.94	e.	4.5	.....		5/10 St.Cu., sw.
						500	966.7	10.3	.....	74	9.27	ese.	5.9	.....		
6:38	979.0	8.0	74	e.	4.5	671	947.3	14.1	−2.22	73	11.75	se.	8.2	0		
						750	938.4	14.2	.....	70	11.33	se.	8.8	.....		3/10 St.Cu., sw.
						1,000	910.9	14.5	.....	61	10.07	sse.	10.6	.....		
6:57	979.1	8.2	73	e.	4.5	1,124	897.8	14.6	−0.11	56	9.31	sse.	11.5	2,200		Light fog from 7:00 to 8:45 a. m.
						1,250	884.5	13.8	.....	59	9.31	sse.	11.0	.....		
						1,500	858.8	12.2	.....	64	9.09	s.	10.1	4,200		1/10 Ci., wnw.; 3/10 St.Cu., sw.
						1,750	833.2	10.6	.....	70	8.95	s.	9.2	6,500		
						2,000	808.6	9.0	.....	76	8.72	ssw.	8.3	7,200		1/10 Ci., wnw.; 1/10 St. Cu., sw.
9:04	979.1	11.9	59	ese.	6.7	2,197	789.7	7.7	0.64	80	8.41	ssw.	7.6	11,000		
						2,250	784.3	7.3	.....	81	8.69	ssw.	7.8	.....		
						2,500	760.6	5.5	.....	85	7.68	ssw.	8.9	11,500		
						2,750	737.7	3.7	.....	90	7.16	ssw.	9.9	.....		
9:26	978.8	12.5	59	ese.	7.2	2,921	722.6	2.5	0.72	93	6.80	ssw.	10.6	.....		
						3,000	715.4	2.0	.....	92	6.51	ssw.	10.9	.....		
						3,250	693.5	0.5	.....	88	5.57	sw.	12.0	.....		
						3,500	672.4	− 1.0	.....	84	4.72	sw.	13.0	.....		
						3,750	652.0	− 2.5	.....	80	3.97	wsw.	14.1	.....		
9:43	978.6	13.2	59	ese.	7.6	4,000	631.5	− 4.1	.....	76	3.20	wsw.	15.1	.....		
						4,024	629.5	− 4.2	0.61	76	3.27	wsw.	15.2	16,800		
						4,000	631.5	− 4.1	.....	76	3.29	wsw.	15.2	.....		
						3,750	652.0	− 2.5	.....	77	3.82	wsw.	14.8	12,000		
						3,500	672.4	− 1.0	.....	78	4.38	sw.	14.3	.....		
						3,250	693.5	0.6	.....	80	5.10	sw.	13.9	.....		
10:00	978.4	13.8	59	ese.	6.3	3,161	701.2	1.1	0.52	80	5.30	sw.	13.8	.....		
						3,000	715.4	1.9	.....	81	5.68	sw.	12.5	.....		
						2,750	737.7	3.2	.....	82	6.31	ssw.	10.5	.....		
						2,500	760.6	4.5	.....	84	7.07	s.	8.5	.....		
10:09	978.3	14.1	59	ese.	8.5	2,318	778.0	5.5	0.90	85	7.68	s.	7.0	.....		2/10 Ci., wnw.
						2,250	784.3	6.1	.....	83	7.82	s.	7.5	10,400		
						2,000	808.6	8.4	.....	73	8.04	s.	9.4	.....		1/10 Ci., wnw.; 3/10 A.Cu., w.
						1,750	833.0	10.6	.....	64	8.18	sse.	11.3	.....		
						1,500	858.4	12.9	.....	55	8.18	sse.	13.2	8,400		
10:46	977.9	15.5	58	se.	7.2	1,308	878.1	14.6	0.27	48	7.98	sse.	14.7	.....		1/10 Ci., wnw.; 4/10 A. Cu., wsw.
						1,250	884.0	14.8	.....	50	8.42	sse.	14.9	.....		
						1,000	910.0	15.4	.....	60	10.50	se.	15.6	6,000		
						750	937.4	16.1	.....	70	12.81	se.	16.4	.....		
11:08	977.6	16.3	60	se.	7.2	742	938.3	16.1	−3.80	70	12.81	se.	16.4	.....		
11:11	977.6	16.4	59	se.	7.2	650	948.6	12.6	1.54	66	9.65	se.	15.2	3,100		
						500	965.5	14.9	.....	61	10.33	se.	10.2	.....		1/10 Ci., wnw.
11:16	977.5	16.5	58	se.	6.7	396	977.5	16.5	.....	58	10.89	se.	6.7	.....		5/10 A.Cu., wsw.

October 3, 1918 (No. 2).

P. M.																
12:15	976.6	18.0	60	sse.	6.3	396	976.6	18.0	.....	60	12.38	sse.	6.3	.....		Few Ci.St., wnw.; 8/10 A.Cu., wsw.
						500	964.6	16.8	.....	63	12.05	sse.	8.9	.....		
12:18	976.5	18.9	58	sse.	8.9	622	950.9	15.3	1.19	67	11.64	se.	11.9	.....		
						750	936.4	15.2	.....	64	11.05	se.	13.4	2,300		
						1,000	908.9	15.1	.....	58	9.95	sse.	16.4	.....		
12:34	976.0	18.7	60	sse.	6.3	1,229	884.8	14.9	0.66	53	8.98	sse.	19.1	5,800		3/10 Ci.St., wnw.; 4/10 A.Cu., wsw.
						1,250	882.2	14.8	.....	54	9.09	sse.	18.8	.....		
						1,500	856.4	13.8	.....	60	9.47	s.	15.3	.....		
12:41	975.8	19.4	58	sse.	8.0	1,709	835.7	12.9	0.42	65	9.67	s.	12.3	7,800		
						1,750	831.5	12.6	.....	64	9.34	s.	12.2	.....		
1:03	975.2	20.4	55	sse.	7.6	2,004	806.7	11.7	0.41	59	8.11	s.	11.5	8,800		
						2,250	782.7	9.8	.....	62	7.51	s.	11.8	9,000		
						2,500	759.1	7.9	.....	64	6.82	ssw.	12.1	.....		
1:36	974.5	19.8	58	se.	8.9	2,661	744.4	6.7	0.76	66	6.47	ssw.	12.3	9,800		
						2,750	736.2	6.1	.....	68	6.41	ssw.	12.4	.....		
						3,000	714.3	4.4	.....	75	6.28	ssw.	12.8	.....		
						3,250	693.3	2.6	.....	82	6.04	sw.	13.1	11,000		
						3,500	672.4	0.9	.....	88	5.74	sw.	13.4	.....		3/10 Ci.St., wnw.; 5/10 A.Cu., wsw.
1:50	974.2	20.6	56	se.	8.9	3,618	662.4	0.1	0.70	91	5.60	sw.	13.6	.....		
						3,500	672.4	0.9	.....	89	5.80	sw.	13.9	.....		
						3,250	693.9	2.7	.....	84	6.23	sw.	14.6	.....		
						3,000	715.6	4.4	.....	79	6.61	ssw.	15.4	.....		
						2,750	737.4	6.2	.....	74	7.02	ssw.	16.1	.....		
2:06	974.0	21.0	56	se.	8.9	2,634	747.9	7.0	0.81	72	7.21	ssw.	16.4	8,700		
						2,500	759.6	8.1	.....	68	7.34	ssw.	15.9	.....		
						2,250	782.7	10.2	.....	61	7.59	ssw.	15.0	6,500		
						2,000	806.8	12.2	.....	55	7.82	s.	14.1	.....		
						1,750	830.9	14.2	.....	49	7.93	s.	13.1	5,400		
						1,500	855.5	16.2	.....	42	7.74	s.	12.2	.....		4/10 Ci.St., wnw.; 4/10 A.Cu., wsw.
2:42	973.7	20.4	58	sse.	8.9	1,419	863.9	16.9	0.46	40	7.70	s.	11.9	.....		
						1,250	881.0	17.7	.....	42	8.50	s.	13.9	.....		
2:48	973.7	20.8	57	s.	8.0	1,094	897.3	18.4	−1.41	44	9.31	s.	15.8	3,300		
						1,000	907.3	17.6	.....	50	10.06	sse.	15.6	.....		
2:56	973.6	20.6	58	sse.	8.0	917	916.1	15.9	0.53	66	11.93	se.	15.1	.....		
						750	934.4	16.1	.....	66	12.08	se.	15.2	.....		
3:03	973.6	21.4	57	sse.	8.0	730	936.6	16.9	1.33	68	13.09	se.	15.8	1,300		
						500	961.9	20.4	.....	58	13.90	sse.	10.4	.....		
3:10	973.5	22.0	54	sse.	8.0	396	973.5	22.0	.....	54	14.28	sse.	8.0	.....		3/10 Ci.St., wnw.; 2/10 A.St., wnw.; 3/10 A.Cu., wsw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 4, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δ *t* / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:53	965.5	20.6	52	ssw.	8.9	396	965.5	20.6		52	12.62	ssw.	8.9		7/10 A.St., w.; 3/10 St.Cu., wsw.
						500	954.0	19.8		51	11.78	ssw.	14.1		
7:55	965.5	20.7	51	ssw.	8.9	654	937.2	18.7	0.74	49	10.57	ssw.	21.7		
						750	926.6	20.0		44	10.29	ssw.	20.4		
8:09	965.5	20.8	50	ssw.	10.7	1,000	900.2	23.3		31	8.87	sw.	16.9	0	
						1,101	889.9	24.6	−1.32	25	7.74	sw.	15.5		
8:22	965.5	20.9	49	ssw.	10.3	1,250	874.7	24.4		23	7.03	sw.	15.7		6/10 A.St., w.; 3/10 St.Cu., wsw.
						1,472	852.8	24.0	0.16	20	5.97	sw.	16.0	1,350	
						1,500	850.1	23.8		20	5.90	sw.	16.1		
						1,750	825.8	21.8		21	5.49	sw.	16.6		
						2,000	801.8	19.7		21	4.82	sw.	17.1		
						2,250	778.7	17.6		22	4.43	wsw.	17.7	3,800	
						2,500	756.1	15.7		22	3.92	wsw.	18.2	5,500	
						2,750	734.2	13.7		23	3.61	wsw.	18.7		
8:55	965.5	21.9	47	ssw.	6.7	2,873	723.8	12.7	0.78	23	3.38	wsw.	19.0	5,800	
						2,750	734.2	13.6		23	3.58	wsw.	19.3		2/10 A.St., w.; 4/10 mammato Cu., wsw.; 4/10 St.Cu., wsw.
						2,500	756.1	15.5		23	4.05	wsw.	19.8		
						2,250	778.7	17.5		23	4.60	wsw.	20.4		
						2,000	801.8	19.4		22	4.96	wsw.	21.0		
						1,750	825.8	21.3		22	5.57	wsw.	21.5	2,800	
						1,500	850.1	23.2		22	6.26	wsw.	22.1		
9:35	965.3	22.8	43	sw.	8.9	1,407	858.9	23.9	−0.81	22	6.53	wsw.	22.3		
						1,250	874.7	22.6		22	6.03	sw.	22.7		
9:40	965.3	22.8	42	sw.	8.9	1,122	887.4	21.6	−1.02	22	5.68	sw.	23.1		
						1,000	900.2	20.4		26	6.23	sw.	23.2	965	
9:51	965.2	23.3	42	ssw.	8.5	856	915.2	18.9	0.88	31	6.77	ssw.	23.4		
						750	926.6	19.8		37	8.55	ssw.	20.9	0	
10:01	965.2	23.3	41	ssw.	11.2	652	937.2	20.7	1.02	43	10.50	ssw.	18.5		
						500	954.0	22.2		42	11.24	ssw.	14.7		
10:05	965.2	23.3	41	ssw.	12.1	396	965.2	23.3		41	11.73	ssw.	12.1		10/10 St.Cu., wsw. Kites did not reach cloud level.

October 5, 1918.

A. M.															
7:15	964.9	15.4	71	nw.	3.1	396	964.9	15.4		71	12.42	nw.	3.1		6/10 A.Cu., w.
						500	953.0	16.7		65	12.36	nw.	5.8		
7:18	964.9	15.4	71	nw.	3.1	691	932.1	19.1	−1.25	54	11.94	nnw.	10.8		
						750	925.6	19.0		53	11.64	nnw.	11.1	0	
						1,000	898.9	18.6		48	10.29	nw.	12.3		
7:34	965.0	15.3	69	nw.	3.1	1,250	873.4	18.3		44	9.25	nw.	13.5		
						1,306	867.8	18.2	0.15	43	8.99	nw.	13.8	700	
7:41	965.1	15.6	70	nw.	3.6	1,500	848.3	17.6		43	8.66	wnw.	13.9		
						1,576	840.8	16.0	0.81	43	7.82	wnw.	14.2		
						1,750	823.4	14.4		47	7.71	wnw.	14.5	2,800	
						2,000	799.2	12.0		52	7.30	wnw.	15.0		
						2,250	776.2	9.6		58	6.93	wnw.	15.5		
8:01	965.2	16.7	65	nw.	3.1	2,292	772.2	9.2	0.95	59	6.87	wnw.	15.6	5,000	
						2,500	753.5	7.8		56	6.34	wnw.	15.8		2/10 A.Cu., w.
						2,750	730.7	6.1		53	4.99	wnw.	16.0		
8:18	965.3	17.5	62	nw.	3.6	2,973	710.8	4.7	0.66	50	4.27	wnw.	16.2	7,000	
						3,000	708.4	4.5		51	4.29	wnw.	16.3		
						3,250	686.9	2.7		63	4.67	wnw.	17.4		
8:47	965.4	19.0	55	nw.	3.6	3,500	666.5	0.8		76	4.92	wnw.	18.6	8,900	
						3,641	655.1	−0.3	0.75	83	4.95	wnw.	19.2		
8:59	965.5	19.6	54	nw.	3.6	3,750	646.3	−0.5		72	4.22	wnw.	21.4	9,800	
9:10	965.6	19.9	52	nw.	4.5	3,883	635.5	−0.8	0.48	62	3.54	wnw.	24.0		
						3,817	641.0	−0.3	0.24	47	2.80	wnw.	26.0	10,900	
						3,750	646.3	−0.1		58	3.51	wnw.	23.9		
9:28	965.7	20.9	50	nnw.	3.1	3,607	658.4	0.2	0.82	82	5.08	wnw.	19.4		Few A.Cu., w.
						3,500	667.2	1.1		78	5.16	wnw.	19.1		
						3,250	688.0	3.1		68	5.19	wnw.	18.4	6,800	
						3,000	709.0	5.2		59	5.22	wnw.	17.7		
10:00	965.9	21.8	47	nw.	3.1	2,750	731.1	7.2		49	4.98	wnw.	17.1		
						2,505	753.4	9.2	0.76	40	4.66	wnw.	16.4	4,400	
						2,250	777.1	11.2		39	5.19	wnw.	16.0		
						2,000	800.5	13.2		38	5.76	wnw.	15.7		
						1,750	824.4	15.1		37	6.35	nw.	15.3	2,800	
10:24	965.7	22.6	45	nw.	3.6	1,500	849.3	16.9		36	6.93	nw.	14.9		
						1,485	850.6	17.0	−0.30	36	6.98	nw.	14.9		
10:35	965.7	23.6	42	nw.	3.6	1,250	874.5	16.3		40	7.41	nw.	13.8	1,080	
						1,218	877.7	16.2	0.79	40	7.37	nw.	13.6		
						1,000	900.5	17.9		42	8.61	nw.	10.8		
10:45	965.6	23.5	41	nw.	4.0	750	927.2	19.9		44	10.23	nw.	7.9	0	
						607	942.5	21.0	1.18	45	11.19	nw.	5.7		
10:47	965.6	23.5	40	nw.	4.0	500	954.1	22.3		42	11.31	nw.	4.8		
						396	965.6	23.5		40	11.58	nw.	4.0		Cloudless.

October 6, 1918.

A. M.															
6:15	968.1	9.3	82	ene.	3.1	396	968.1	9.3		82	9.61	ene.	3.1		4/10 A.St., nw.
						500	956.5	13.5		66	10.21	e.	7.3		
6:18	968.1	9.3	82	e.	3.6	541	951.6	15.1	−4.00	59	10.12	ese.	9.0	0	
6:31	968.3	9.1	86	e.	3.6	694	934.7	17.2	−1.37	42	8.24	e.	6.7	260	
						750	928.9	16.9		42	8.08	e.	6.4	260	
						1,000	902.6	15.8		44	7.90	e.	4.8	1,700	4/10 A.St., nw.; 1/10 St.Cu., wnw.
						1,250	877.0	14.7		45	7.52	e.	3.3	3,000	2/10 St.Cu., wnw.
8:39	969.6	12.9	73	e.	4.0	1,264	875.5	14.6	0.46	45	7.48	e.	3.2		
						1,500	851.6	13.9		50	7.94	se.	4.4		
						1,750	826.6	13.1		54	8.14	s.	5.7		4/10 A.Cu., nw.
9:01	969.6	13.9	71	e.	5.8	1,885	813.2	12.7	0.36	57	8.37	ssw.	6.4	4,500	
						1,750	826.6	13.2		55	8.34	ssw.	6.4		
						1,500	851.4	14.3		52	8.48	ssw.	6.4	2,300	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 6, 1918—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
9:18	969.5	14.4	68	e.	5.4	1,463	854.7	14.4	0.40	51	8.36	ssw.	6.4		
						1,250	876.4	15.3		48	8.34	sse.	6.4		
						1,000	902.3	16.3		45	8.34	ese.	6.3	1,000	
9:32	969.4	14.6	65	e.	4.5	867	916.8	16.8	−1.45	47	8.23	e.	6.3		
						750	929.5	15.1		52	8.92	e.	5.8	1,105	
9:43	969.3	15.5	64	e.	5.4	528	954.2	11.9	2.35	68	9.47	e.	4.8		
						500	957.6	12.6		68	9.92	e.	4.8		
9:49	969.3	15.0	66	e.	4.9	396	969.3	15.0		66	11.25	e.	4.9		1/10 A.Cu., nw.
October 7, 1918.															
A. M.															
7:27	969.5	14.4	66	se.	8.0	396	969.5	14.4		66	10.83	se.	8.0		5/10 Cl.St., sw.; 2/10 St.Cu., sw.
						500	937.8	13.4		71	10.91	sse.	14.0		
7:32	969.6	14.6	67	se.	8.5	575	949.3	12.7	0.95	74	10.87	s.	18.4	1,280	
						750	930.2	15.4		70	12.25	ssw.	17.8		
						1,000	903.1	19.2		65	14.46	sw.	16.8		
7:36	969.6	14.7	67	se.	8.0	1,120	890.5	21.0	−1.52	62	15.42	sw.	16.4		4/10 Cl.St., sw.; 2/10 St.Cu., sw.
						1,250	877.0	20.1		61	14.35	sw.	16.3	4,000	
						1,500	851.8	18.4		60	12.70	sw.	16.2		
						1,750	827.3	16.6		58	10.96	sw.	16.0		
						2,000	803.3	14.9		57	9.66	sw.	15.9	7,900	
						2,250	780.0	13.1		55	8.29	sw.	15.7		
8:03	969.9	14.9	67	se.	8.5	2,486	758.5	11.5	0.70	54	7.38	sw.	15.6		
						2,500	757.2	11.4		54	7.28	sw.	15.5		
						2,750	734.8	9.5		56	6.65	sw.	14.2	9,500	3/10 Cl.St., sw.; 1/10 A.Cu., sw.
						3,000	713.2	7.8		57	6.03	sw.	12.8	10,500	
						3,250	692.4	6.0		59	5.52	sw.	11.5	13,300	
9:03	969.9	18.0	58	se.	8.0	3,451	675.5	4.5	0.78	60	5.05	sw.	10.4		
						3,250	692.7	6.2		58	5.50	sw.	11.9		
						3,000	714.0	8.2		56	6.09	sw.	13.8		
						2,750	736.0	10.3		54	6.77	sw.	15.7	9,900	
						2,500	758.6	12.4		52	7.49	sw.	17.6		Few Cl.St., sw.; 7/10 St.Cu., sw.
9:33	969.9	18.1	57	se.	9.8	2,257	780.3	14.4	0.35	50	8.20	sw.	19.4	8,300	
						2,250	781.2	14.4		50	8.20	sw.	19.4		
						2,000	804.5	15.3		60	10.43	sw.	18.1		
						1,750	827.3	16.2		69	12.71	sw.	16.9		
9:40	969.9	18.0	57	se.	6.7	1,720	831.3	16.3	0.80	70	12.97	sw.	16.7		
						1,500	852.4	18.1		66	13.71	sw.	17.0		
						1,250	878.7	20.1		63	14.59	ssw.	17.3	4,200	
						1,000	904.2	22.1		58	15.43	ssw.	17.6		
9:54	969.9	17.8	59	se.	8.5	973	906.8	22.3	−1.78	58	15.62	ssw.	17.6		
						750	938.8	18.3		63	13.25	s.	16.2	1,800	
10:05	969.9	17.8	59	se.	8.9	500	948.0	15.5	1.14	66	11.62	s.	15.2		
						500	958.1	16.5		63	11.83	sse.	12.3		
10:09	969.9	17.7	60	se.	8.9	396	969.9	17.7		60	12.15	se.	8.9		2/10 A.Cu., sw.; 7/10 St.Cu., sw.
October 8, 1918.															
A. M.															
10:26	974.5	19.2	64	n.	8.9	396	974.5	19.2		64	14.21	n.	8.9		Few Cl., w.
						500	962.7	17.9		67	13.74	n.	11.0		
10:30	974.5	19.2	64	nne.	8.0	743	935.7	14.8	1.27	73	12.29	n.	15.8	1,470	
						750	934.9	14.8		72	12.12	n.	15.8		
						1,000	907.7	15.9		39	7.05	nne.	14.2		
10:38	974.4	19.4	63	nne.	5.8	1,024	905.0	16.0	−0.43	36	6.54	nne.	14.0		
						1,250	881.2	14.9		31	5.25	nne.	12.0	2,500	
						1,500	855.7	13.8		26	4.10	n.	9.8	3,100	Few Cl., w.
11:18	974.4	20.7	57	nne.	4.5	1,684	837.1	12.9	0.47	22	3.27	n.	8.1	3,000	
						1,750	830.9	12.6		22	3.21	n.	8.5		
						2,000	806.6	11.3		22	2.95	n.	9.8		
						2,250	782.6	10.1		22	2.72	nnw.	11.1		
11:41	974.6	20.6	50	ne.	5.8	2,397	768.9	9.3	0.50	22	2.58	nnw.	11.9		
						2,500	759.1	8.5		24	2.66	nnw.	12.5		
						2,750	736.3	6.7		28	2.75	nw.	14.0		
						3,000	714.5	4.9		32	2.77	nw.	15.5		
						3,250	693.3	3.0		37	2.80	nw.	17.0		
						3,500	672.3	1.2		41	2.73	wnw.	18.5		
11:57	974.7	21.2	45	nne.	5.4	3,513	671.1	1.1	0.73	41	2.71	wnw.	18.6	8,000	
						3,750	651.4	−0.4		46	2.72	w.	16.5		1/10 Cl., w.; few A.Cu., w.
P. M.															
12:21	974.5	21.4	41	nne.	6.7	3,881	640.4	−1.3	0.65	49	2.69	w.	15.4	8,800	
						3,750	651.4	−0.5		48	2.81	w.	16.0		
						3,500	672.3	1.2		46	3.06	wnw.	17.2		
						3,250	693.3	2.8		45	3.36	wnw.	18.3		
						3,000	714.5	4.4		43	3.60	nw.	19.5		
12:41	974.2	22.0	40	nne.	5.4	2,831	729.2	5.5	0.72	42	3.79	nw.	20.3		
						2,750	736.3	6.1		41	3.86	nw.	19.2	3,500	
						2,500	759.1	7.9		38	4.05	nw.	16.0		
						2,250	782.6	9.7		36	4.33	nnw.	12.7		
						2,000	806.6	11.5		33	4.48	nnw.	9.4		
						1,750	830.9	13.3		30	4.58	nnw.	6.1		
1:04	974.0	22.8	32	ne.	4.9	1,712	834.6	13.6	0.52	30	4.67	nnw.	5.6	1,500	
						1,500	856.0	14.7		28	4.68	nnw.	8.5		
						1,250	881.5	16.0		25	4.54	n.	11.8	890	
1:30	974.0	23.3	34	ne.	5.8	1,193	887.5	16.3	0.43	24	4.45	n.	12.6		
						1,000	907.7	17.3		31	6.12	nne.	11.7		
						750	934.9	18.2		37	7.73	ne.	10.9	0	
1:44	974.0	23.0	33	ne.	6.3	635	947.4	18.7	1.88	40	8.63	ne.	10.5		
						500	962.5	21.2		36	9.06	ne.	8.1		
1:47	974.0	23.2	33	ne.	6.3	396	974.0	23.2		33	9.39	ne.	6.3		Few Cl.St., w.; 3/10 A.Cu., w.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 9, 1918 (No. 1).

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
8:56	975.3	18.4	70	sse.	4.0	396	975.3	18.4	.....	70	14.81	sse.	4.0	.....	6/10 Ci.St., wsw
						500	963.7	17.7	.....	71	14.38	sse.	5.7	.....	
						750	935.7	15.9	.....	74	13.37	sse.	9.9	.....	
9:14	975.2	18.4	68	sse.	6.3	758	934.8	15.8	0.72	74	13.28	sse.	10.0	1,510	
10:09	975.0	20.8	59	s.	4.5	863	923.2	18.9	−2.96	23	5.02	s.	4.3	2,000	
						1,000	908.5	17.8	.....	24	4.89	s.	4.8	1,600	
						1,250	882.1	15.8	.....	25	4.49	s.	5.8	.....	
						1,500	856.5	13.7	.....	26	4.08	s.	6.8	.....	
10:14	974.9	21.1	58	s.	4.5	1,516	854.6	13.6	0.62	26	4.05	s.	6.9	.....	7/10 Ci.St., wsw.
						1,500	856.5	13.7	.....	27	4.23	s.	6.9	.....	
						1,250	882.1	14.7	.....	37	6.19	s.	7.0	.....	
						1,000	908.5	15.7	.....	47	8.38	s.	7.2	.....	
						750	935.7	16.8	.....	58	11.10	s.	7.3	520	
10:35	974.8	21.4	54	ssw.	5.4	720	938.7	16.9	1.45	59	11.36	s.	7.3	.....	
						500	963.0	20.1	.....	56	13.18	s.	6.3	.....	
10:40	974.8	21.6	54	s.	5.8	396	974.8	21.6	.....	54	13.93	s.	5.8	.....	7/10 Ci.St., wsw.

October 9, 1918 (No. 2).

P. M.															
12:53	973.4	22.9	42	s.	5.3	396	973.4	22.9	.....	42	11.73	s.	5.3	.....	10/10 Ci.St., wsw.
						500	961.7	21.1	.....	46	11.51	s.	6.7	.....	
1:01	973.3	22.9	43	s.	4.9	566	954.4	19.9	1.77	48	11.16	s.	7.6	0	
						750	933.8	17.9	.....	51	10.46	s.	7.7	.....	
						1,000	906.5	15.3	.....	54	9.39	s.	7.9	1,500	
1:23	972.9	23.4	41	s.	6.2	1,094	896.7	14.3	1.06	56	9.13	s.	8.0	1,600	
						1,250	880.4	13.8	.....	50	7.89	s.	8.3	.....	
						1,500	854.4	12.9	.....	39	5.80	ssw.	8.8	.....	
1:42	972.6	23.7	41	ssw.	4.9	1,630	841.2	12.5	0.34	34	4.93	ssw.	9.1	.....	
						1,750	829.0	11.7	.....	36	4.95	ssw.	8.7	4,000	
						2,000	804.2	9.9	.....	42	5.12	sw.	7.9	5,000	
						2,250	780.0	8.1	.....	47	5.08	sw.	7.0	.....	
2:20	972.2	24.2	38	ssw.	5.7	2,319	773.9	7.6	0.71	48	5.01	sw.	6.8	6,300	
						2,500	756.5	5.9	.....	65	6.04	sw.	7.6	.....	
2:45	972.1	23.8	36	ssw.	7.8	2,728	735.5	3.8	0.93	87	6.98	sw.	8.7	7,700	
						2,750	733.7	3.7	.....	86	6.85	sw.	8.8	8,100	
						3,000	711.4	3.0	.....	72	5.46	sw.	10.3	.....	
						3,250	690.0	2.3	.....	58	4.18	sw.	11.8	.....	
						3,500	669.6	1.6	.....	45	3.09	sw.	13.4	.....	
						3,750	649.0	0.9	.....	31	2.02	sw.	14.9	.....	
3:09	971.8	24.0	36	ssw.	4.5	3,840	641.8	0.6	0.19	26	1.66	sw.	15.4	8,500	
						3,750	649.0	0.7	.....	24	1.54	sw.	13.8	.....	
3:17	971.7	23.8	37	ssw.	3.7	3,627	659.2	0.8	0.44	22	1.42	sw.	11.6	.....	
						3,500	669.7	1.4	.....	27	1.83	sw.	11.2	.....	
						3,250	690.9	2.5	.....	37	2.70	sw.	10.5	6,100	
						3,000	712.5	3.5	.....	47	3.69	sw.	9.7	.....	
						2,750	734.7	4.6	.....	57	4.83	sw.	9.0	.....	
3:33	971.4	23.4	38	ssw.	4.5	2,623	745.9	5.2	0.79	62	5.49	sw.	8.6	.....	
						2,500	757.1	6.2	.....	59	5.59	sw.	9.0	.....	
						2,250	780.0	8.2	.....	52	5.65	ssw.	9.7	3,200	
						2,000	804.2	10.1	.....	45	5.56	ssw.	10.4	.....	10/10 Ci.St., wsw.
						1,750	828.7	12.1	.....	39	5.51	ssw.	11.2	2,200	
						1,500	853.5	14.1	.....	32	5.15	s.	11.9	.....	
4:04	970.9	23.1	37	s.	4.9	1,377	865.8	15.1	0.51	29	4.98	s.	12.3	1,800	
						1,250	878.9	15.7	.....	33	5.89	s.	11.1	.....	
						1,000	905.0	17.0	.....	40	7.75	s.	8.9	.....	
4:17	970.8	23.0	36	s.	4.1	946	910.6	17.3	0.98	42	8.30	s.	8.4	460	
						750	932.0	19.2	.....	40	8.90	s.	8.0	.....	
4:28	970.8	23.0	37	s.	4.1	649	942.7	20.2	1.03	39	9.24	s.	7.8	0	
						500	959.0	21.7	.....	37	9.61	s.	5.6	.....	
4:35	970.7	22.8	36	s.	4.1	396	970.7	22.8	.....	36	9.99	s.	4.1	.....	6/10 Ci.St., wsw.; 4/10 A.St., wsw

October 10, 1918

P. M.															
2:26	965.7	18.1	92	sse.	5.4	396	965.7	18.1	.....	92	19.11	sse.	5.4	.....	9/10 St.Cu., sw.; few Fr.St., ssw.
						500	954.4	17.6	.....	92	18.52	s.	7.2	.....	
						750	927.0	16.3	.....	92	17.05	ssw.	11.5	.....	
2:37	965.7	18.3	92	s.	5.8	799	921.4	16.0	0.52	92	16.73	ssw.	12.4	560	Altitude of Fr.St. base about 900 m.
						1,000	899.3	14.8	.....	90	15.15	ssw.	12.5	.....	
						1,250	873.5	13.4	.....	86	13.22	sw.	12.6	950	
2:57	965.5	18.3	92	se.	4.5	1,454	852.5	12.2	0.58	84	11.94	sw.	12.7	.....	6/10 St.Cu., sw.; 2/10 Fr.St., ssw.; 2/10 St., sse.
						1,500	848.2	11.8	.....	86	11.90	sw.	12.8	840	
						1,750	823.0	9.4	.....	97	11.44	sw.	13.4	.....	
3:31	965.5	18.5	94	se.	3.1	1,819	815.8	8.8	0.93	100	11.33	sw.	13.6	2,300	Threatening conditions in w. and nw.
						2,000	797.9	8.2	.....	94	10.22	sw.	12.8	.....	
						2,250	774.1	7.8	.....	88	9.31	sw.	12.2	.....	
						2,500	751.5	6.7	.....	76	7.46	sw.	10.7	.....	
3:36	965.5	18.6	93	se.	3.1	2,525	749.3	6.6	0.34	75	7.31	sw.	10.6	2,600	
						2,500	751.9	6.7	.....	77	7.55	sw.	10.4	.....	
						2,250	775.1	7.7	.....	94	9.88	sw.	8.7	.....	
3:43	965.5	18.8	91	se.	2.7	2,162	783.3	7.9	0.62	100	10.65	sw.	8.1	.....	
						2,000	798.8	8.9	.....	98	11.17	sw.	8.7	.....	
						1,750	823.0	10.5	.....	96	12.19	sw.	9.6	2,000	
						1,500	848.2	11.4	.....	95	12.81	ssw.	10.2	.....	
						1,250	873.5	13.6	.....	91	14.18	ssw.	11.5	4,000	9/10 St.Cu., sw.; 1/10 Fr.St., ssw.
4:02	965.5	18.6	93	se.	2.7	1,215	877.2	13.8	0.67	91	14.36	ssw.	11.6	.....	
						1,000	899.3	15.2	.....	90	15.54	s.	10.7	.....	Altitude of St.Cu. base over 2,400 m.
4:08	965.5	18.6	93	se.	2.7	750	926.5	16.9	0.48	89	17.13	sse.	9.7	.....	
						500	954.4	18.1	.....	92	19.11	se.	4.4	.....	
4:12	965.5	18.6	93	se.	2.2	396	965.5	18.6	.....	93	19.93	se.	2.2	.....	9/10 St.Cu., sw.; 1/10 Fr.St., ssw.; rain began 4:20 p. m. becoming heavy; thunder began in nw. at 4:27 p. m.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 12, 1918.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
6:55	968.6	13.2	92	WSW.	5.8	396	968.6	13.2	.....	92	13.96	WSW.	5.8	.....	3/10 Ci.St., nnw.
						500	957.0	15.8	.....	74	13.28	W.	8.4	.....	
						750	929.5	22.2	.....	33	8.83	WNW.	14.6	.....	
7:04	968.6	13.7	90	SW.	5.8	771	927.1	22.7	−2.54	29	8.00	WNW.	15.1	.....	
						1,000	903.0	21.2	.....	30	7.55	W.	10.0	0	
7:25	968.6	14.8	84	SW.	6.3	1,133	889.2	20.4	0.64	31	7.43	W.	7.0	330	
						1,250	877.8	19.4	.....	31	6.98	W.	7.3	.....	1/10 Ci.St., nnw.
						1,500	852.5	17.3	.....	32	6.32	W.	7.8	1,040	
						1,750	827.9	15.1	.....	33	5.66	W.	8.4	.....	
						2,000	803.5	13.0	.....	34	5.09	W.	9.0	.....	
8:03	968.6	15.1	84	SW.	5.8	2,022	801.2	12.8	0.86	34	5.03	W.	9.0	.....	
						2,250	780.0	10.7	.....	40	5.15	WNW.	9.5	2,500	
						2,500	757.1	8.4	.....	47	5.18	NW.	10.1	.....	
8:59	968.9	16.6	78	WSW.	4.9	2,549	752.9	8.0	0.91	48	5.15	NW.	10.2	3,100	Few Ci.St., nnw.
						2,750	734.8	7.2	.....	45	4.57	NW.	9.3	.....	
						3,000	712.9	6.2	.....	42	3.98	NW.	8.2	.....	
						3,250	691.9	5.2	.....	39	3.45	NW.	7.0	5,000	
						3,500	671.3	4.2	.....	35	2.89	NW.	5.9	5,000	
						3,750	650.6	3.3	.....	32	2.48	NW.	4.8	.....	
9:48	968.9	19.6	69	WSW.	5.4	3,814	645.2	3.0	0.37	31	2.35	NW.	4.5	.....	
						3,750	650.5	3.2	.....	32	2.46	NW.	5.1	.....	
						3,500	670.7	4.1	.....	34	2.78	NW.	7.7	3,500	
						3,250	691.0	4.9	.....	36	3.12	NW.	10.1	3,400	
10:11	968.9	20.9	58	W.	5.4	3,076	705.9	5.5	0.70	37	3.34	NW.	11.9	.....	
						3,000	712.7	6.0	.....	38	3.55	NW.	11.6	.....	
						2,750	734.8	7.8	.....	43	4.55	NW.	10.5	.....	
						2,500	757.1	9.5	.....	48	5.70	NW.	9.5	.....	
10:25	968.9	22.0	56	WSW.	4.9	2,487	758.7	9.6	0.87	48	5.74	NW.	9.4	1,900	
						2,250	780.0	11.7	.....	45	6.19	NW.	9.5	.....	
						2,000	803.5	13.8	.....	42	6.63	WNW.	9.7	1,390	
						1,750	827.9	16.0	.....	40	7.27	WNW.	9.9	.....	
10:49	968.9	22.6	50	W.	5.4	1,532	849.8	17.9	0.93	37	7.59	WNW.	10.0	1,080	
						1,500	852.8	18.2	.....	37	7.73	WNW.	9.9	.....	
						1,250	877.8	20.5	.....	33	7.96	WNW.	9.2	380	
						1,000	903.6	22.9	.....	30	8.38	WNW.	8.6	.....	
11:13	968.9	23.9	46	W.	4.9	780	927.1	24.9	−0.57	27	8.50	WNW.	8.0	0	
						750	930.1	24.7	.....	28	8.71	WNW.	8.0	.....	
11:16	968.9	24.1	47	WSW.	4.9	505	956.9	22.6	1.47	38	10.42	W.	8.0	.....	
11:18	968.9	24.2	47	WSW.	4.9	396	968.9	24.2	.....	47	11.18	WSW.	4.9	.....	Few Ci.St., nnw.

October 13, 1918.

A. M.															
6:34	976.2	9.2	67	n.	2.2	396	976.2	9.2	.....	67	7.80	n.	2.2	.....	Cloudless.
						500	963.9	10.6	.....	63	8.05	n.	6.9	.....	
6:36	976.2	9.2	67	n.	2.2	568	956.2	11.5	−1.34	61	8.28	n.	9.9	.....	
						750	936.1	11.1	.....	55	7.27	n.	11.5	.....	
						1,000	908.9	10.6	.....	47	6.01	n.	13.7	0	
						1,250	881.6	10.0	.....	38	4.67	n.	16.0	.....	
7:06	976.5	9.6	64	n.	2.2	1,334	872.5	9.8	0.22	36	4.36	n.	16.7	1,080	
						1,500	855.5	8.6	.....	39	4.36	n.	17.7	.....	
						1,750	829.9	6.7	.....	42	4.12	nnw.	19.2	2,500	
7:18	976.6	10.0	64	n.	2.7	1,880	818.7	5.9	0.74	44	4.09	nnw.	19.8	.....	
						2,000	804.9	6.0	.....	38	3.55	nnw.	19.1	2,800	
7:25	976.6	10.1	64	n.	2.7	2,175	787.6	6.1	0.15	34	3.20	nnw.	18.5	3,100	
						2,000	804.9	6.7	.....	37	3.63	nnw.	18.8	.....	
						1,750	829.9	7.6	.....	41	4.28	nnw.	19.2	.....	
7:37	976.8	10.6	59	n.	2.7	1,643	840.6	8.0	0.56	43	4.61	nnw.	19.4	.....	
						1,500	855.5	8.8	.....	39	4.42	nnw.	17.4	.....	
8:05	977.1	12.6	48	n.	1.8	1,267	879.9	10.1	−0.65	33	4.08	n.	16.8	1,100	
						1,250	881.6	10.0	.....	34	4.18	n.	16.1	.....	
8:08	977.2	12.6	48	n.	1.8	1,129	894.8	9.2	0.34	38	4.42	n.	10.7	.....	
						1,000	908.9	9.6	.....	40	4.78	n.	10.2	660	
						750	936.9	10.5	.....	44	5.59	nnw.	9.2	0	
8:20	977.5	13.0	48	nnw.	1.8	569	957.5	11.1	1.16	47	6.21	nnw.	8.4	.....	
						500	965.9	11.9	.....	47	6.55	nnw.	5.8	.....	
8:22	977.5	13.1	48	nnw.	1.8	396	977.5	13.1	.....	48	7.24	nnw.	1.8	.....	Cloudless.

October 14, 1918 (No. 1).

A. M.															
7:04	975.3	10.4	57	sse.	4.5	396	975.3	10.4	.....	57	7.19	sse.	4.5	.....	Cloudless.
						500	963.5	12.0	.....	52	7.30	s.	8.0	.....	
7:08	975.2	10.4	57	sse.	4.5	730	937.2	15.7	−1.59	40	7.14	ssw.	15.8	460	
						750	935.1	15.6	.....	40	7.09	ssw.	15.8	.....	
						1,000	908.0	14.7	.....	38	6.36	ssw.	15.8	.....	
7:24	975.1	11.3	46	sse.	4.9	1,225	884.0	13.8	0.38	36	5.68	ssw.	15.8	3,800	
						1,250	881.6	13.7	.....	37	5.80	ssw.	16.1	.....	
						1,500	855.9	13.0	.....	45	6.74	sw.	18.8	.....	
7:36	974.9	11.5	50	sse.	5.4	1,755	829.9	12.2	0.30	54	7.67	sw.	21.5	8,300	
						2,000	805.8	11.7	.....	50	6.88	sw.	19.5	.....	
						2,250	782.0	11.2	.....	46	6.12	wsw.	17.4	9,800	
7:56	974.7	12.5	51	sse.	4.9	2,353	772.6	11.0	0.20	44	5.78	wsw.	16.6	.....	
						2,500	759.0	9.7	.....	46	5.53	wsw.	15.6	11,800	
						2,750	736.7	7.6	.....	50	5.22	w.	13.8	.....	
						3,000	715.0	5.4	.....	53	4.75	w.	12.0	12,700	
8:49	974.1	16.2	43	s.	7.6	3,146	702.3	4.1	0.87	55	4.50	w.	10.9	.....	
						3,250	693.4	3.7	.....	51	4.06	w.	10.9	.....	
8:58	974.0	16.4	42	s.	6.7	3,418	679.0	2.9	0.50	44	3.31	w.	10.9	13,700	
						3,250	693.4	3.8	.....	43	3.45	w.	11.6	.....	
9:17	973.8	17.5	40	s.	8.5	3,113	704.5	4.6	0.77	43	3.65	w.	12.2	14,000	
						3,000	714.3	5.5	.....	46	4.15	w.	12.7	13,500	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 14, 1918 (No. 1)—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\,m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
9:35	973.6	17.2	40	s.	7.6	2,801	731.8	7.0	0.88	52	5.21	WSW.	13.7	.....	
						2,750	736.7	7.4	.....	51	5.25	WSW.	14.1	.....	
						2,500	759.0	9.6	.....	47	5.62	WSW.	15.8	10,500	
						2,250	782.0	11.8	.....	43	5.95	WSW.	17.5	.....	
						2,000	805.8	14.1	.....	39	6.28	WSW.	19.3	.....	
10:01	973.3	19.1	36	s.	11.6	1,938	811.8	14.6	0.69	38	6.32	WSW.	19.7	7,600	
						1,750	829.8	15.9	.....	37	6.69	WSW.	20.4	.....	
						1,500	854.8	17.6	.....	36	7.25	SW.	21.4	.....	
10:13	973.1	19.1	36	s.	10.7	1,417	863.1	18.2	−0.92	36	7.52	SW.	21.7	6,000	
						1,250	880.3	16.7	.....	45	8.55	SSW.	21.4	.....	
10:25	972.9	19.7	34	s.	10.3	1,188	886.5	16.1	0.06	48	8.78	SSW.	21.3	4,400	
						1,000	906.7	16.2	.....	44	8.10	SSW.	19.5	.....	
						750	933.8	16.4	.....	39	7.27	S.	17.1	.....	
10:41	972.6	20.0	34	SSW.	10.7	690	939.8	16.4	1.23	38	7.09	S.	16.5	1,500	
						500	960.9	18.7	.....	35	7.55	SSW.	12.2	.....	
10:47	972.5	20.0	34	SSW.	9.8	396	972.5	20.0	.....	34	7.95	SSW.	9.8	.....	Cloudless.

October 14, 1918 (No. 2).

A. M.															
11:32	971.9	22.0	30	SSW.	4.5	396	971.9	22.0	.....	30	7.93	SSW.	4.5	.....	Cloudless.
						500	960.0	20.9	.....	30	7.42	SSW.	7.6	.....	
						750	932.4	18.3	.....	30	6.31	SSW.	15.1	.....	
11:40	971.6	22.3	31	SSW.	4.9	793	927.8	17.8	1.06	30	6.09	SSW.	16.4	1,500	
						1,000	905.3	16.7	.....	32	6.08	SSW.	17.5	.....	
11:49	971.3	23.4	29	SSW.	4.9	1,101	894.7	16.1	0.55	33	6.04	SSW.	18.1	.....	
						1,250	879.0	16.5	.....	33	6.19	SW.	18.8	4,600	
11:56	971.0	23.5	29	SSW.	4.9	1,388	864.9	19.2	−0.24	32	7.12	SW.	24.3	.....	
						1,500	853.0	18.4	.....	32	6.77	SW.	23.5	.....	
						1,750	827.9	16.6	.....	31	5.86	SW.	21.7	8,500	
						2,000	804.0	14.8	.....	31	5.22	SW.	19.9	.....	
						2,250	780.9	13.0	.....	30	4.49	SW.	18.1	9,700	
P. M.															
12:31	970.2	24.4	30	SSW.	4.5	2,438	763.6	11.7	0.71	30	4.12	SW.	16.8	9,700	
						2,500	758.0	11.3	.....	30	4.02	SW.	16.8	11,000	
						2,750	735.8	9.5	.....	28	3.32	SW.	16.6	.....	
						3,000	713.6	7.8	.....	27	2.86	WSW.	16.4	.....	
12:58	969.6	25.2	30	SSW.	3.6	3,115	703.6	7.0	0.73	26	2.61	WSW.	16.3	11,500	
						3,000	713.6	7.9	.....	26	2.77	WSW.	16.8	.....	
						2,750	735.8	9.8	.....	25	3.03	SW.	17.9	.....	
						2,500	758.0	11.7	.....	24	3.30	SW.	19.1	.....	
1:52	969.3	26.7	31	SSW.	4.0	2,400	767.1	12.5	0.69	24	3.48	SW.	19.5	8,000	
						2,250	780.9	13.5	.....	25	3.87	SW.	19.7	.....	
						2,000	804.0	14.3	.....	26	4.24	SW.	19.9	.....	
2:15	669.0	26.6	29	SSW.	3.6	1,762	826.9	16.9	−0.09	28	5.39	SW.	20.2	.....	
						1,750	827.9	16.9	.....	28	5.39	SW.	20.2	5,000	
						1,500	853.0	16.7	.....	30	5.70	SSW.	19.8	.....	
2:29	968.9	26.8	30	SSW.	4.5	1,416	861.3	16.6	0.87	31	5.86	SSW.	19.6	.....	
						1,250	878.3	18.0	.....	34	7.02	SSW.	14.3	2,200	
2:36	968.8	27.0	30	SSW.	4.5	1,198	883.5	18.5	0.92	35	7.46	SSW.	12.7	.....	
						1,000	904.1	20.3	.....	34	8.10	SSW.	12.7	.....	
2:47	968.7	27.0	30	SSW.	4.0	750	930.4	22.6	1.30	32	8.78	SSW.	12.7	420	
						500	957.5	25.8	.....	31	10.30	SSW.	6.6	.....	
2:53	968 7	27.2	31	SSW.	4.0	396	968.7	27.2	.....	31	11.18	SSW.	4.0	.....	Cloudless.

October 14, 1918 (No. 3).

P. M.															
3:31	968.4	27.0	31	SSW.	13.4	396	968.4	27.0	.....	31	11.05	SSW.	13.4	.....	Cloudless.
						500	957.0	25.8	.....	31	10.30	SSW.	14.3	.....	
						750	930.2	22.8	.....	31	8.61	SSW.	16.3	.....	
3:37	968.4	26.8	31	SSW.	13.9	762	928.8	22.7	1.17	31	8.55	SSW.	16.4	660	
						1,000	903.5	20.6	.....	31	7.52	SSW.	18.8	.....	
						1,250	877.8	18.5	.....	34	7.24	SSW.	21.3	.....	
3:52	968.3	26.9	30	SSW.	13.9	1,280	874.7	18.2	0.87	34	7.11	SSW.	21.6	2,706	
						1,500	851.8	17.4	.....	32	6.36	SSW.	20.8	.....	
						1,750	827.0	16.5	.....	30	5.63	SW.	19.9	4,700	
						2,000	803.2	15.6	.....	28	4.96	SW.	18.9	.....	
4:07	968.1	26.7	30	SSW.	13.4	2,149	789.5	15.1	0.36	27	4.63	SW.	18.4	.....	
						2,250	780.0	14.0	.....	26	4.15	SW.	18.0	5,800	Cloudless.
						2,500	757.2	11.4	.....	25	3.37	SW.	17.0	.....	
4:27	967.9	26.4	33	SSW.	11.2	2,506	756.6	11.3	0.92	25	3.35	SW.	17.0	6,500	
						2,500	757.2	11.3	.....	25	3.35	SW.	17.0	.....	
						2,250	780.0	13.3	.....	26	3.97	SW.	16.8	.....	
						2,000	803.2	15.3	.....	27	4.69	SW.	16.7	.....	
4:55	967.6	25.6	35	s.	9.4	1,765	825.6	17.1	0.43	28	5.46	SW.	16.5	3,600	
						1,750	827.0	17.2	.....	28	5.49	SW.	16.6	.....	
						1,500	851.8	18.3	.....	33	6.94	SW.	17.7	.....	
						1,250	877.1	19.3	.....	38	8.51	SW.	18.7	.....	
5:44	967.6	23.8	36	SSW.	9.4	1,211	880.9	19.5	0.68	39	8.84	SW.	18.9	2,200	
						1,000	902.8	20.9	.....	37	9.15	SW.	18.9	.....	
6:07	967.6	23.3	37	SSW.	8.9	752	928.8	22.6	0.56	35	9.60	SSW.	19.0	260	
						500	956.0	22.7	.....	36	9.93	SSW.	11.2	.....	
6:13	967.6	22.8	37	SSW.	8.0	396	967.6	22.8	.....	37	10.27	SSW.	8.0	.....	Few Cl., sw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 14, 1918 (No. 4).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
6:53	967.6	22.5	35	ssw.	8.9	396	967.6	22.5	.....	35	9.54	ssw.	8.9	.....	Few Cl.St., sw.
						500	955.8	22.6	.....	35	9.60	ssw.	15.5	.....	
6:58	967.6	22.4	35	ssw.	9.8	658	938.8	22.7	−0.76	34	9.38	ssw.	25.4	0	
						750	928.5	22.2	.....	34	9.10	ssw.	25.7	.....	
						1,000	901.9	21.0	.....	34	8.46	ssw.	26.4	.....	
						1,250	876.5	19.7	.....	35	8.03	ssw.	27.2	.....	
7:15	967.5	22.3	35	ssw.	10.7	1,361	845.5	19.2	1.72	35	7.79	ssw.	27.5	2,000	
						1,500	851.4	18.7	.....	35	7.55	ssw.	26.0	.....	
						1,750	826.9	17.7	.....	35	7.09	ssw.	23.4	.....	
7:23	967.4	22.0	35	ssw.	9.8	1,809	812.9	17.2	0.42	35	6.87	ssw.	21.9	4,000	
						1,750	826.9	17.9	.....	35	7.18	ssw.	23.9	.....	
						1,500	851.4	19.1	.....	35	7.74	ssw.	27.5	.....	
						1,250	876.5	20.3	.....	34	8.10	ssw.	31.0	.....	
7:50	967.3	20.9	37	ssw.	8.5	1,236	877.9	20.4	0.38	34	8.15	ssw.	31.2	.....	
						1,000	901.9	21.3	.....	35	8.87	ssw.	31.2	.....	
7:58	967.2	20.6	38	ssw.	10.3	810	922.0	22.0	−0.63	35	9.25	ssw.	31.2	.....	
						750	928.5	21.8	.....	35	9.14	ssw.	29.9	0	
8:52	967.5	20.2	37	ssw.	10.7	524	953.1	20.2	0.00	36	8.52	ssw.	22.0	.....	
						500	955.8	20.2	.....	36	8.52	ssw.	20.0	.....	
8:55	967.6	20.2	37	ssw.	11.6	396	967.6	20.2	.....	37	8.76	ssw.	11.6	.....	ew Cl.St., sw.

October 15, 1918.

A. M.															
7:24	968.8	15.7	57	sw.	12.1	396	968.8	15.7	.....	57	10.17	sw.	12.1	.....	1/.0 Cl., wnw.; few Cl.St., wnw.
						500	957.3	16.7	.....	54	10.27	sw.	14.1	.....	
7:29	968.9	15.9	55	sw.	10.3	752	929.4	19.1	−0.96	46	10.17	wsw.	18.9	0	
						1,000	903.8	21.0	.....	37	9.20	w.	4.6	200	Few Cl., wnw.; 1/10 Cl.St., wnw.
8:55	969.6	19.0	46	w.	7.2	1,037	899.9	21.3	−0.92	36	9.12	w.	2.5	.....	
						1,000	903.8	20.9	.....	36	8.90	w.	3.4	1,010	
						750	931.0	18.3	.....	40	8.41	w.	9.3	.....	
9:23	969.7	20.0	42	w.	5.4	641	942.4	17.1	1.19	41	8.00	w.	11.9	.....	
						500	958.4	18.8	.....	42	9.11	w.	8.2	.....	
9:26	969.7	20.0	42	w.	5.4	396	969.7	20.0	.....	42	9.82	w.	5.4	.....	Few Cl., wnw.; 1/10 Cl.St., wnw.

October 16, 1918.

A. M.															
6:40	969.8	14.2	68	s.	5.8	396	969.8	14.2	.....	68	11.01	s.	5.8	.....	3/10 Cl.Cu., wnw.: 3/10 A.St., wnw.
						500	957.8	16.8	.....	62	11.86	ssw.	10.3	.....	3/10 A.Cu. wnw.
6:44	969.8	14.2	68	s.	5.8	676	938.4	21.2	−2.50	53	13.35	sw.	18.0	0	
						750	930.2	21.0	.....	51	12.68	sw.	17.9	.....	
						1,000	903.5	20.4	.....	43	10.31	sw.	17.5	2,000	
						1,250	877.8	19.7	.....	36	8.26	sw.	17.2	.....	
6:57	969.9	14.2	66	ssw.	7.6	1,484	854.6	19.1	0.26	29	6.41	sw.	16.8	3,000	
						1,500	853.0	19.0	.....	29	6.37	sw.	16.5	.....	
						1,750	828.5	17.0	.....	28	5.43	sw.	12.2	.....	
7:19	969.9	14.2	68	s.	7.6	1,858	817.9	16.3	0.75	27	5.00	sw.	10.4	3,800	
						2,000	804.3	15.3	.....	26	4.52	sw.	11.1	.....	
						2,250	780.5	13.5	.....	25	3.87	sw.	12.2	5,200	
						2,500	757.0	11.7	.....	24	3.30	sw.	13.4	.....	
						2,750	734.7	9.9	.....	23	2.81	sw.	14.6	.....	
						3,000	713.3	8.1	.....	23	2.48	sw.	15.8	.....	
7:45	969.9	15.3	63	ssw.	6.7	3,132	702.5	7.2	0.71	22	2.24	sw.	16.4	7,000	1/10 Cl.St., wnw: 1/10 Cl.Cu., wnw, 1/10 A.St., wnw.; 4/10 A.Cu., wnw.
						3,250	692.9	6.9	.....	21	2.09	sw.	17.2	.....	
						3,500	671.8	6.2	.....	19	1.80	sw.	18.9	7,200	
8:03	969.9	16.7	59	ssw.	8.5	3,515	670.4	6.1	0.30	19	1.79	sw.	19.0	.....	
						3,500	671.8	6.1	.....	19	1.79	sw.	18.9	.....	
						3,250	692.9	6.9	.....	19	1.89	sw.	17.9	.....	
						3,000	713.3	7.7	.....	18	1.89	ssw.	16.5	6,000	
8:43	969.9	18.2	54	sw.	8.5	2,826	728.5	8.3	0.75	18	1.97	ssw.	16.1	.....	
						2,750	734.7	8.9	.....	18	2.05	ssw.	15.4	.....	
						2,500	757.0	10.7	.....	19	2.45	ssw.	13.2	.....	
						2,250	780.5	12.6	.....	20	2.92	ssw.	11.0	4,500	
8:51	969.9	18.7	53	sw.	10.7	2,009	803.5	14.4	0.77	21	3.44	ssw.	8.9	.....	
						2,000	804.3	14.5	.....	21	3.47	ssw.	9.0	.....	
						1,750	828.5	16.4	.....	22	4.10	ssw.	11.2	3,800	
						1,500	853.0	18.3	.....	23	4.84	sw.	13.4	.....	
9:18	969.8	19.4	51	sw.	7.6	1,255	877.9	20.2	0.33	24	5.68	sw.	15.6	3,300	
						1,000	904.1	21.0	.....	27	6.71	sw.	19.0	.....	
9:29	969.8	19.8	50	sw.	8.0	774	928.1	21.8	−2.03	29	7.57	sw.	22.1	1,200	
						750	930.8	21.3	.....	30	7.60	sw.	21.2	.....	
9:34	969.7	20.2	50	sw.	8.9	631	943.6	18.9	0.68	35	7.64	sw.	16.6	.....	
						500	957.8	19.8	.....	43	9.93	sw.	12.6	.....	
9:37	969.7	20.5	50	sw.	9.4	396	969.7	20.5	.....	50	12.06	sw.	9.4	.....	5/10 Cl.St., wnw.; 1/10 Cl.Cu., wnw.; 1/10 A.Cu., wnw.

October 17, 1918.

P. M.															
3:33	967.6	20.4	52	nne.	4.0	396	967.6	20.4	.....	52	12.46	nne.	4.0	.....	6/10 Cl.St., wsw., 3/10 A.St., wsw.
						500	956.0	19.4	.....	53	11.94	nne.	4.8	.....	
						750	928.1	16.9	.....	55	10.53	ne.	6.7	.....	
3:37	967.6	20.4	52	nne.	4.0	788	924.2	16.3	0.99	55	10.32	ne.	7.0	2,400	
3:58	967.6	20.5	53	ne.	4.0	1,001	901.4	14.4	0.99	62	10.17	ne.	10.6	3,000	
						1,250	875.2	14.3	.....	58	9.45	ene.	9.0	.....	
4:08	967.6	20.5	53	ne.	4.0	1,333	866.7	14.3	0.03	56	9.13	ene.	8.4	5,200	2/10 Cl.St., wsw., 4/10 A.St., wsw.; 4/10 A.Cu., wsw.
						1,500	850.0	13.5	.....	55	8.66	e.	7.0	7,100	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 17, 1918—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*Volts.*	
						1,750	825.0	13.1		53	7.99	ese.	5.0		
						2,000	800.4	12.3		51	7.30	sse.	3.0		Light smoke from Minnesota forest fires prevailed throughout this flight.
5:20	967.7	19.0	58	ene.	3.1	2,019	798.6	12.3	0.30	51	7.30	sse.	2.8		
						2,000	800.4	12.4		51	7.34	sse.	3.0	4,500	
						1,750	825.0	13.1		53	7.99	se.	5.0		
						1,500	850.0	13.9		54	8.58	ese.	7.0	5,400	
5:47	967.8	18.1	60	ene.	3.6	1,318	868.0	14.4	−0.90	55	9.02	e.	8.6		
						1,250	875.2	13.4		61	9.38	ene.	10.5		
5:53	967.9	17.9	62	ene.	3.6	1,141	886.5	12.8	0.50	64	9.46	ene.	11.5	4,400	
						1,000	901.2	13.5		65	10.06	ene.	11.3		
						750	928.1	14.6		66	10.97	ene.	11.0		
6:07	968.0	17.8	60	ene.	6.7	719	931.9	14.9	0.77	66	11.18	ene.	10.9	1,800	
						500	956.0	16.6		61	11.52	ene.	7.8		
6:14	968.1	17.4	59	ene.	6.3	396	968.1	17.4		59	11.72	ene.	6.3		7/10 A.St., wsw.; 3/10 A.Cu., wsw.

October 18, 1918.

A. M.															
7:01	973.0	8.8	93	e.	3.6	396	973.0	8.8		93	10.54	e.	3.6		10/10 St., ese.
						500	961.0	7.8		96	10.16	ese.	8.6		
7:07	973.0	8.8	91	e.	3.1	609	948.3	6.8	0.94	100	9.88	se.	13.9		
						750	932.4	11.7		91	12.51	se.	8.9	4,700	Altitude of St. base about 700 m.
7:30	973.2	8.9	88	e.	3.6	807	926.2	13.7	−3.48	87	13.64	sse.	6.9	7,800	10/10 Cl.St., w.
8:12	973.4	9.4	86	e.	4.0	857	919.8	11.9	0.18	91	12.68	sse.	6.5	13,300	4/10 Cl.St., w.; 6/10 St., ese.
						1,000	905.0	12.7		86	12.63	sse.	5.5		
8:46	973.5	9.8	86	e.	4.0	1,246	879.5	14.0	0.08	78	12.46	s.	3.8		
						1,000	905.0	15.7		62	11.06	sse.	6.1		
9:08	973.6	9.7	85	ese.	3.1	994	905.8	15.8	−0.57	62	11.13	sse.	6.2		
9:11	973.6	9.7	85	ese.	3.1	877	918.5	10.1	−2.16	91	11.25	sse.	6.2	6,300	
						750	932.4	7.4		97	9.99	se.	7.3		Altitude of St. base about 700 m.
9:25	973.6	9.7	85	ese.	2.7	692	939.2	6.1	1.22	100	9.42	ese.	7.8	2,400	
						500	961.0	8.4		90	9.92	ese.	4.2		
9:31	973.6	9.7	85	ese.	2.2	396	973.6	9.7		85	10.23	ese.	2.2		10/10 St., ese.

October 20, 1918.

A. M.															
7:14	974.8	8.6	95	wnw.	4.9	396	974.8	8.6		95	10.61	wnw.	4.9		Cloudless.
						500	963.0	12.7		61	8.96	nw.	11.4		
7:16	974.9	8.6	95	wnw.	4.9	547	957.4	14.6	−3.97	46	7.65	nw.	14.4		Light fog at beginning of flight, continued to 8:00 a. m.
						750	934.5	14.5		36	5.94	nw.	12.3		
7:23	974.9	8.8	93	wnw.	4.9	767	932.7	14.5	0.05	35	5.78	nnw.	12.1	0	
						1,000	907.2	12.7		36	5.29	nw.	12.6		
7:35	975.1	9.2	90	nw.	4.5	1,251	880.8	10.8	0.76	37	4.79	wnw.	13.1	810	
						1,500	855.1	9.0		47	5.40	wnw.	14.1		
						1,750	829.4	7.2		56	5.69	wnw.	15.0		
						2,000	804.7	5.4		66	5.92	nw.	16.0	2,300	
						2,250	780.5	3.6		75	5.93	nw.	16.9		
7:58	975.3	9.9	87	nw.	4.5	2,293	776.3	3.3	0.72	77	5.96	nw.	17.1		
						2,500	757.0	2.1		68	4.83	nw.	13.8		
8:03	975.3	10.0	86	nw.	4.9	2,519	755.2	2.0	0.58	67	4.73	nw.	13.5	4,000	
8:14	975.4	10.9	83	wnw.	3.6	2,699	738.9	2.9	−0.50	48	3.61	nw.	13.6		
						2,750	734.1	2.8		47	3.51	nw.	13.8		
						3,000	712.0	2.1		44	3.13	nw.	14.8	5,200	
						3,250	690.8	1.5		41	2.79	nw.	15.8		
						3,500	669.8	0.9		37	2.41	nw.	16.9		
8:39	975.6	12.6	76	wnw.	4.0	3,604	661.2	0.6	0.25	36	2.30	nw.	17.3	6,500	
						3,750	649.0	0.2		34	2.11	nw.	17.3		
						4,000	628.4	−0.5		31	1.82	nw.	17.2	8,500	
9:08	975.7	12.5	72	wnw.	2.2	4,023	626.6	−0.6	0.33	31	1.80	nw.	17.2		
						4,000	628.4	−0.5		31	1.82	nw.	17.0		
						3,750	649.0	0.4		31	1.95	nw.	15.0		
						3,500	669.3	1.4		31	2.10	nw.	12.8		
9:44	975.9	14.3	65	nw.	2.7	3,327	683.3	2.0	−0.42	31	2.19	nw.	11.5		
						3,250	690.2	1.7		32	2.21	nw.	11.9		
9:52	976.0	14.5	63	nw.	2.7	3,064	705.7	0.9	0.33	36	2.35	nw.	12.7	5,200	
						3,000	711.4	1.1		37	2.45	nw.	12.6		
						2,750	733.7	2.0		42	2.97	nw.	12.2		
						2,500	757.0	3.0		46	3.49	nw.	11.9		
10:06	976.0	15.0	58	nnw.	2.7	2,436	764.4	3.2	0.70	47	3.61	nw.	11.8	3,700	
						2,250	781.3	4.5		53	4.46	nw.	12.8		
						2,000	805.7	6.3		61	5.83	nw.	14.3		
10:18	976.0	15.8	56	nnw.	2.2	1,837	821.8	7.4	0.75	66	6.80	nw.	15.2		
						1,750	830.1	8.1		63	6.80	nw.	14.4	2,000	
						1,500	856.0	9.9		54	6.59	nnw.	12.2		
						1,250	882.3	11.8		45	6.23	nnw.	9.9		
10:32	976.0	16.7	53	nnw.	2.2	1,240	883.2	11.9	0.65	45	6.27	nnw.	9.8	260	
						1,000	908.9	13.5		43	6.65	nnw.	8.2		
						750	936.1	15.1		39	6.69	nnw.	6.3		
10:46	976.0	16.8	51	n.	2.2	675	944.4	15.6	0.65	38	6.73	nnw.	5.8		
						500	963.5	16.7		43	8.17	nnw.	2.5		
10:51	975.2	17.4	47	nnw.	2.2	396	975.2	17.4		47	9.34	nnw.	2.2		Cloudless.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 21, 1918 (No. 1).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:05	973.6	9.3	85	se.	4.5	396	973.6	9.3	.....	85	9.96	se.	4.5	.....	4/10 Ci., wsw.; 3/10 A.Cu., wsw.
7:07	973.6	9.3	85	se.	4.5	499	961.8	16.3	−6.80	65	12.04	sse.	13.2	.....	
						750	933.9	15.0	.....	67	11.42	s.	12.4	.....	
7:16	973.6	9.6	84	se.	5.4	780	930.5	14.8	0.53	67	11.28	s.	12.3	780	
						1,000	906.4	13.2	.....	70	10.62	s.	11.4	.....	
						1,250	879.5	11.4	.....	74	9.98	s.	10.3	2,100	
						1,500	853.4	9.6	.....	77	9.20	s.	9.2	3,400	
						1,750	828.4	7.7	.....	80	8.41	s.	8.2	.....	
7:55	973.6	10.9	81	se.	4.5	1,934	810.2	6.4	0.73	83	7.98	s.	7.4	4,000	
						2,000	803.8	6.2	.....	84	7.96	s.	7.9	.....	
						2,250	779.0	5.5	.....	88	7.95	sw.	9.8	5,000	
8:30	973.4	11.4	79	se.	4.5	2,288	775.6	5.4	0.28	89	7.98	sw.	10.1	.....	
						2,500	755.2	3.7	.....	91	7.24	sw.	9.8	.....	
						2,750	732.2	1.8	.....	93	6.47	sw.	9.5	.....	
						3,000	710.1	−0.2	.....	95	5.71	sw.	9.2	.....	10/10 A.Cu., wsw.; altitute of A.Cu. base about 2,950 m.
8:52	973.3	11.6	80	se.	4.9	3,163	696.1	−1.5	0.79	97	5.23	sw.	9.0	9,500	
						3,250	688.7	−0.7	.....	87	5.01	sw.	8.5	.....	
8:55	973.3	11.6	80	se.	4.5	3,380	677.3	0.5	−0.92	71	4.49	sw.	7.8	.....	
						3,500	667.4	0.6	.....	64	4.08	wsw.	6.7	.....	
9:00	973.3	11.6	80	se.	4.0	3,595	659.6	0.6	0.24	55	3.51	wsw.	5.8	.....	
						3,500	667.4	0.8	.....	58	3.75	wsw.	6.8	.....	
9:09	973.2	11.7	81	se.	4.9	3,383	677.3	1.1	−2.41	62	4.10	wsw.	8.0	.....	
9:11	973.2	11.8	82	se.	4.0	3,279	686.1	−1.4	0.72	83	4.52	wsw.	8.0	.....	
						3,250	688.7	−1.2	.....	83	4.59	wsw.	8.0	.....	
						3,000	710.1	0.6	.....	85	5.42	wsw.	8.5	.....	
						2,750	732.2	2.4	.....	86	6.24	sw.	8.9	7,700	Altitude of A.Cu. base about 3,050 m.
						2,500	755.2	4.2	.....	87	7.18	sw.	9.3	.....	
9:34	972.9	12.4	79	sse.	5.8	2,373	767.5	5.1	0.51	88	7.74	sw.	9.5	6,500	
						2,250	779.0	5.7	.....	83	7.60	sw.	10.1	.....	
						2,000	803.0	7.0	.....	73	7.31	ssw.	11.3	.....	
						1,750	827.8	8.3	.....	64	7.01	s.	12.4	5,000	
9:53	972.7	13.5	76	sse.	4.9	1,610	841.9	9.0	0.60	58	6.66	s.	13.1	.....	
						1,500	852.8	9.7	.....	63	7.58	s.	13.2	.....	
9:59	972.6	14.0	73	s.	4.0	1,276	876.3	11.0	0.80	73	9.58	s.	13.3	3,000	
						1,250	879.0	11.2	.....	72	9.58	s.	13.4	.....	
						1,000	905.5	13.2	.....	66	10.01	s.	14.3	.....	
						750	932.9	15.2	.....	59	10.19	s.	15.2	.....	
10:17	972.5	15.2	69	sse.	5.8	723	935.7	15.4	−0.96	58	10.15	s.	15.3	920	
10:21	972.5	15.6	68	sse.	4.9	525	957.8	13.5	1.79	68	10.52	sse.	14.6	.....	
						500	960.8	13.9	.....	68	10.80	sse.	12.7	.....	
10:23	972.5	15.8	68	sse.	4.9	396	972.5	15.8	.....	68	12.21	sse.	4.9	.....	Few Ci.St., wsw.; 5/10 A.Cu., wsw.

October 21, 1918 (No. 2).

A. M.															
11:07	972.1	17.4	62	s.	5.4	396	972.1	17.4	.....	62	12.32	s.	5.4	.....	1/10 Ci.St., wsw.; 3/10 A.Cu., wsw.
						500	960.5	16.4	.....	62	11.56	s.	7.8	.....	
11:12	972.0	17.7	62	s.	5.4	695	938.5	14.5	0.97	62	10.24	sse.	12.3	.....	
						750	932.4	14.3	.....	62	10.11	sse.	12.3	1,200	
						1,000	905.2	13.3	.....	63	9.62	s.	12.2	.....	
						1,250	878.8	12.3	.....	63	9.02	s.	12.2	4,500	
						1,500	852.8	11.4	.....	63	8.49	s.	12.1	.....	
11:42	971.3	18.7	55	s.	6.7	1,750	826.4	10.4	.....	64	8.07	ssw.	12.0	.....	2/10 Ci.St., wsw.
						1,823	830.0	10.1	0.39	64	7.91	ssw.	12.0	5,800	
						2,000	802.6	8.7	.....	68	7.65	ssw.	11.4	.....	
						2,250	778.5	6.7	.....	72	7.06	ssw.	10.7	7,800	
						2,500	754.6	4.7	.....	77	6.58	ssw.	9.9	.....	5/10 Ci.St., wsw.
						2,750	731.8	2.8	.....	82	6.13	ssw.	9.1	8,500	
P. M.															
12:42	970.2	20.0	51	s.	7.6	2,934	715.3	1.3	0.79	86	5.77	ssw.	8.5	9,800	
						3,000	709.7	1.3	.....	82	5.50	ssw.	8.7	.....	
						3,250	687.9	1.2	.....	65	4.33	ssw.	9.7	.....	
						3,500	667.0	1.2	.....	49	3.26	sw.	10.7	.....	
12:54	970.0	20.1	50	s.	8.9	3,651	654.2	1.1	0.14	38	2.52	sw.	11.3	.....	
						3,500	667.0	1.1	.....	48	3.18	sw.	11.3	.....	
						3,250	687.9	1.1	.....	52	3.44	sw.	11.3	8,500	
1:04	969.9	20.4	46	s.	7.6	3,191	692.8	1.1	0.77	65	4.30	sw.	11.3	.....	
						3,000	709.7	2.5	.....	79	5.77	ssw.	7.7	.....	
1:08	969.8	20.4	45	s.	8.5	2,958	713.1	2.9	0.51	83	6.25	ssw.	6.8	.....	
						2,750	731.8	4.0	.....	78	6.34	ssw.	8.2	.....	
						2,500	754.6	5.2	.....	71	6.28	ssw.	9.8	8,000	
						2,250	777.7	6.5	.....	64	6.20	s.	11.4	.....	
						2,000	801.2	7.8	.....	57	6.03	s.	13.0	.....	
1:30	969.5	20.4	44	s.	11.2	1,944	806.7	8.1	−0.07	56	6.05	s.	13.4	.....	
1:35	969.5	20.2	44	s.	11.2	1,810	820.0	8.0	0.71	65	6.97	s.	15.6	6,500	
						1,750	825.7	8.4	.....	64	7.05	s.	15.5	.....	
						1,500	851.0	10.2	.....	62	7.72	s.	15.0	.....	
						1,250	877.0	12.0	.....	60	8.42	s.	14.5	3,800	
						1,000	903.7	13.8	.....	58	9.15	s.	14.0	.....	
2:03	969.2	19.4	50	s.	9.4	755	929.4	15.5	1.03	56	9.86	s.	13.5	520	
						500	958.0	18.1	.....	52	10.80	s.	9.3	.....	
2:10	969.0	19.2	51	s.	7.6	396	969.0	19.2	.....	51	11.35	s.	7.6	.....	5/10 Ci.St.,w.; 2/10 A.St., wsw.; 1/10 A.Cu., sw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 21, 1918 (No. 3).

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
2:58	968.2	19.4	52	sse.	7.2	396	968.2	19.4	.....	52	11.72	sse.	7.2	.....	2/10 Cl.St., wsw.; 3/10 A.St., wsw.; 4/10 A.Cu., sw.
						500	956.6	18.5	.....	53	11.29	sse.	9.0	.....	
						750	929.0	16.2	.....	56	10.32	s.	13.2	.....	
3:02	968.2	19.4	52	sse.	5.8	756	928.4	16.1	0.92	56	10.25	s.	13.3	755	
						1,000	902.0	13.8	.....	58	9.15	s.	13.6	.....	
						1,250	875.4	11.4	.....	60	8.09	s.	13.9	.....	
3:16	968.1	19.4	52	s.	6.3	1,288	871.6	11.0	0.96	60	7.88	s.	13.9	3,000	
						1,500	849.0	10.3	.....	56	7.02	s.	14.0	.....	
						1,750	824.0	9.4	.....	51	6.01	s.	14.1	.....	
3:29	968.1	19.4	52	s.	5.8	1,899	812.7	9.0	0.34	49	5.63	s.	14.1	5,000	6/10 A.St., wsw.; 4/10 A.Cu., sw.
						2,000	799.5	8.2	.....	57	6.20	s.	14.2	.....	
						2,250	775.8	6.8	.....	72	7.11	s.	14.4	.....	
						2,500	752.6	5.3	.....	88	7.84	s.	14.6	6,500	
3:49	968.0	19.2	47	s.	6.3	2,698	734.8	4.1	0.59	100	8.19	s.	14.8	.....	
						2,750	730.0	3.9	.....	97	7.84	s.	14.7	.....	
						3,000	707.7	3.1	.....	84	6.41	s.	14.1	8,400	
						3,250	686.2	2.2	.....	70	5.01	ssw.	13.6	.....	
						3,500	665.4	1.3	.....	57	3.82	ssw.	13.0	9,000	
4:17	967.8	18.7	50	s.	4.9	3,640	653.8	0.8	0.35	49	3.17	ssw.	12.7	.....	8/10 A.St., wsw.; 2/10 A.Cu., sw.
						3,750	644.8	− 0.2	.....	54	3.25	ssw.	13.1	10,500	
4:23	967.8	18.7	51	s.	4.9	3,937	629.9	− 1.8	0.66	63	3.31	ssw.	13.8	.....	
						3,750	644.8	− 1.0	.....	67	3.77	ssw.	14.0	.....	
						3,500	665.4	0.2	.....	73	4.53	ssw.	14.3	.....	
						3,250	686.2	1.3	.....	79	5.30	ssw.	14.6	8,000	
						3,000	707.7	2.5	.....	84	6.14	s.	14.9	.....	
						2,750	730.0	3.6	.....	90	7.12	s.	15.2	.....	
						2,500	752.6	4.7	.....	96	8.20	s.	15.5	6,000	
4:52	967.6	18.0	55	s.	4.0	2,438	758.1	5.0	0.63	97	8.46	s.	15.6	.....	
						2,250	775.8	6.2	.....	83	7.87	s.	15.5	.....	
						2,000	799.5	7.8	.....	64	6.77	s.	15.3	.....	
5:09	967.5	17.8	55	sse.	4.9	1,789	820.0	9.1	0.00	48	5.55	s.	15.2	4,000	9/10 A.St., wsw.; 1/10 A. Cu.,sw.
						1,750	824.0	9.1	.....	51	5.90	s.	15.3	.....	
5:17	967.4	17.7	56	s.	4.9	1,568	842.1	9.1	0.88	65	7.51	s.	15.9	.....	
						1,500	849.0	9.7	.....	64	7.70	s.	15.8	.....	
						1,250	875.0	11.9	.....	62	8.64	s.	15.6	2,000	
						1,000	901.5	14.1	.....	60	9.65	s.	15.3	.....	
						750	928.5	16.3	.....	58	10.75	s.	15.1	.....	
5:43	967.1	17.3	56	s.	4.0	673	936.2	17.0	0.00	57	11.05	s.	15.0	0	
						500	956.0	17.0	.....	58	11.24	sse.	8.1	.....	
4:48	967.7	17.0	59	sse.	4.0	396	967.7	17.0	.....	59	11.43	sse.	4.0	.....	8/10 A.St., wsw.; 2/10 St.Cu., sw.

October 21, 1918 (No. 4).

P. M.															
6:24	966.9	16.8	61	sse.	4.0	396	966.9	16.8	.....	61	11.67	sse.	4.0	.....	8/10 A.St., wsw.; 2/10 St.Cu., sw.
						500	955.0	16.5	.....	59	11.07	sse.	8.4	.....	
						750	927.2	15.9	.....	54	9.76	sse.	20.2	.....	
6:33	966.9	16.7	62	sse.	4.5	786	923.5	15.8	0.26	53	9.51	sse.	20.7	0	
						1,000	900.1	13.9	.....	59	9.37	sse.	20.0	.....	
						1,250	873.4	11.7	.....	67	9.21	sse.	19.1	2,000	
						1,500	847.7	9.4	.....	74	8.72	s.	18.3	.....	
						1,750	823.0	7.2	.....	82	8.33	s.	17.4	.....	
6:56	966.9	16.8	61	sse.	4.5	1,817	816.4	6.6	0.89	84	8.19	s.	17.2	4,200	
						2,000	798.5	7.0	.....	70	7.01	s.	18.0	.....	
7:03	966.9	16.8	61	sse.	4.5	2,189	780.3	7.5	−0.24	55	5.70	s.	18.9	.....	6/10 A.St., wsw.; 4/10 St.Cu., sw.
						2,250	774.5	7.1	.....	59	5.95	s.	19.0	5,400	
						2,500	751.3	5.4	.....	77	6.91	s.	19.3	.....	
						2,750	728.8	3.7	.....	95	7.56	s.	19.7	.....	
7:18	966.8	16.7	60	sse.	4.9	2,771	726.5	3.6	0.67	97	7.67	s.	19.7	6,700	
7:26	966.7	16.6	61	s.	5.4	2,954	710.4	3.2	0.22	79	6.08	s.	17.7	.....	
						3,000	706.6	2.9	.....	81	6.10	s.	17.9	7,500	
						3,250	684.8	1.2	.....	89	5.93	s.	19.3	.....	
						3,500	663.9	− 0.5	.....	97	5.68	s.	20.6	.....	
7:45	966.6	16.3	62	s.	4.5	3,516	662.4	− 0.6	0.53	98	5.69	s.	20.7	8,300	
						3,500	663.9	0.0	.....	91	5.56	s.	20.5	.....	
						3,250	681.8	0.4	.....	86	5.41	s.	20.3	.....	
8:08	966.5	16.3	62	s.	4.9	3,090	698.0	1.0	0.60	79	5.19	s.	20.1	.....	
						3,000	705.8	1.5	.....	71	4.84	s.	19.5	.....	
						2,750	727.8	3.0	.....	49	3.71	s.	17.7	.....	
8:20	966.5	16.3	61	s.	4.9	2,624	739.3	3.2	0.47	47	3.61	s.	17.5	.....	
						2,500	750.4	3.8	.....	49	3.93	s.	17.4	4,800	Sprinkling rain; began 8:26, became heavier at 8:40 p. m., and continued at end of flight.
						2,250	773.9	5.0	.....	53	4.62	s.	17.3	.....	
						2,000	798.0	6.1	.....	57	5.37	s.	17.2	.....	
						1,750	822.8	7.3	.....	61	6.24	s.	17.1	.....	
8:43	966.5	15.8	67	s.	4.5	1,578	839.7	8.1	0.89	64	6.91	s.	17.0	.....	
						1,500	847.7	8.8	.....	63	7.14	s.	17.1	.....	
						1,250	873.4	11.0	.....	59	7.75	s.	17.4	700	
						1,000	900.1	13.3	.....	55	8.40	s.	17.8	.....	
9:00	966.5	15.4	69	s.	4.5	782	923.5	15.2	0.00	51	8.81	s.	18.1	0	
						750	927.2	15.2	.....	53	9.15	s.	17.0	.....	
						500	955.0	15.2	.....	66	11.40	s.	8.2	.....	
9:05	966.5	15.2	71	s.	4.5	396	966.5	15.2	.....	71	12.26	s.	4.5	.....	4/10 A.St., wsw.; 6/10 St.Cu., sw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 22, 1918.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	Volts.	
10:37	966.7	14.4	88	ssw.	4.0	396	966.7	14.4		88	14.43	ssw.	4.0		1/10 Cl.St., wsw.; 5/10 St.Cu., wsw.; 1/10 Fr.St., ssw.
10:42	966.8	14.4	89	ssw.	4.0	501	954.9	13.3	1.05	94	14.35	ssw.	6.0		
						750	927.0	12.6		94	14.01	sw.	5.7	560	
						1,000	899.8	11.9		98	13.65	sw.	5.3	1,010	10/10 St., ssw.
						1,250	873.7	11.2		100	13.30	wsw.	5.0		
11:37	966.9	13.2	86	s.	4.0	1,299	868.5	11.1	0.24	100	13.21	wsw.	4.9		
						1,250	873.7	11.2		100	13.30	wsw.	5.0		
						1,000	899.8	11.7		99	13.61	wsw.	5.6		
						750	927.0	12.3		98	14.02	sw.	6.1	0	
11:51	966.9	15.0	87	sw.	4.0	593	944.5	12.6	1.22	97	14.15	sw.	6.5		
						500	955.0	13.7		92	14.43	sw.	5.3		
11:52	966.9	15.0	87	sw.	4.0	396	966.9	15.0		87	14.83	sw.	4.0		6/10 St.Cu., wsw.; 4/10 St., ssw.; rain just preceding and following flight.

October 24, 1918.

A. M.															
6:54	970.5	5.8	81	n.	4.0	396	970.5	5.8		81	7.47	n.	4.0		4/10 Cl.St., sw.; 4/10 A.St., sw.
						500	958.0	5.2		81	7.17	n.	10.5		
6:59	970.6	5.8	81	n.	3.6	634	942.8	4.4	0.59	82	6.86	n.	18.9		
7:01	970.6	5.8	81	n.	3.6	735	931.1	7.0	−2.58	54	5.41	n.	18.9	0	
						750	929.8	7.0		53	5.31	n.	18.7		
						1,000	902.0	7.5		43	4.46	n.	15.9		
						1,250	875.0	7.9		33	3.51	nnw.	13.0	1,040	
7:18	970.7	5.6	84	n.	4.0	1,302	869.4	8.0	−0.18	31	3.33	nnw.	12.4		
						1,500	849.0	7.7		31	3.26	nnw.	10.0		
7:37	970.8	5.5	81	n.	4.0	1,708	827.6	7.3	0.17	31	3.17	nw.	7.4	2,100	
						1,750	823.5	7.0		31	3.11	nw.	7.6		
						2,000	798.7	5.2		30	2.66	nw.	9.0	3,000	
						2,250	774.4	3.4		29	2.26	wnw.	10.3	5,000	
8:00	970.9	5.4	83	n.	4.5	2,342	765.6	2.7	0.73	29	2.15	wnw.	10.8		Solar halo, 23° radius, from 8:00 a. m to 8:38 a. m.
						2,500	750.7	1.5		29	1.97	wnw.	10.9	6,000	
						2,750	727.8	−0.3		30	1.79	wnw.	11.1		
						3,000	705.5	−2.1		30	1.54	wnw.	11.3		3/10 Cl., sw.; 4/10 Cl.St., sw.
8:24	971.1	5.3	82	n.	4.5	3,049	701.0	−2.5	0.74	30	1.49	wnw.	11.3		
						3,250	683.7	−1.9		28	1.46	w.	13.6		
8:34	971.1	5.3	82	n.	4.0	3,359	674.4	−1.6	−0.29	27	1.44	w.	14.8		
						3,500	662.5	−2.6		27	1.33	w.	15.1		
						3,750	642.0	−4.4		27	1.14	w.	15.7	9,400	
8:47	971.2	5.6	81	n.	4.0	3,836	635.0	−5.0	0.76	27	1.08	w.	15.9		
						3,750	642.0	−4.4		27	1.14	w.	16.1	8,000	
						3,500	662.5	−2.7		26	1.27	wnw.	16.6		
9:02	971.3	6.1	78	n.	4.5	3,352	674.4	−1.7	−0.75	26	1.38	wnw.	16.9	6,000	
						3,250	683.7	−2.5		27	1.34	wnw.	14.2		
9:11	971.4	6.5	75	n.	4.5	3,125	694.3	−3.4	0.83	28	1.29	wnw.	10.9		
						3,000	705.5	−2.4		28	1.40	wnw.	11.0		
						2,750	727.8	−0.3		29	1.73	wnw.	11.2		
						2,500	750.7	1.8		29	2.02	wnw.	11.5		
9:27	971.4	7.2	72	n.	5.4	2,465	753.9	2.1	0.74	29	2.06	wnw.	11.5	4,500	
						2,250	774.4	2.3		25	1.80	nw.	11.7		
9:40	971.5	7.5	69	nne.	4.5	2,059	792.7	2.4	0.75	22	1.60	nnw.	11.8		1/10 Cl., sw.; 2/10 Cl.St., sw.
						2,000	798.7	2.8		22	1.64	nnw.	11.7		
						1,750	823.5	4.7		20	1.71	nnw.	11.2	2,600	
9:52	971.6	7.6	67	nne.	7.2	1,554	843.6	6.2	0.18	19	1.80	nnw.	10.8		
						1,500	849.0	6.3		20	1.91	nnw.	11.0		
						1,250	875.0	6.7		22	2.16	nnw.	11.8	1,300	
						1,000	902.3	7.2		25	2.54	n.	12.6		
10:08	971.6	8.0	70	nne.	5.4	927	910.6	7.3	−1.83	26	2.66	n.	12.9		
10:14	971.6	8.2	68	nne.	4.9	768	928.5	4.4	1.05	67	5.61	n.	9.4	0	
						750	930.4	4.6		67	5.68	n.	9.2		
						500	959.0	7.2		68	6.01	nne.	6.2		
10:22	971.6	8.3	68	nne.	4.9	396	971.6	8.3		68	7.45	nne.	4.9		1/10 Cl., sw.; 2/10 Cl.St., sw.

October 23, 1918.

A. M.															
6:56	970.9	0.9	91	nne.	3.6	396	970.9	0.9		91	6.00	nne.	3.6		3/10 A.St., sw.; 5/10 A.Cu., ssw.; few St., ne.
						500	958.3	0.1		93	5.72	nne.	6.4		
7:00	970.9	0.9	91	ne.	4.0	680	937.1	−1.3	0.77	98	5.37	ne.	11.1	2,000	
						750	929.0	0.5		87	5.51	ne.	10.4		
7:17	971.1	1.2	90	ne.	3.1	992	901.6	2.3	−1.15	48	3.46	ne.	8.2		4/10 A.Cu., ssw.; 6/10 St., ne.
						1,000	900.8	2.3		48	3.46	ne.	8.2	3,100	
						1,250	873.0	1.8		41	2.85	ene.	8.5		10/10 St., ne.
						1,500	846.5	1.3		34	2.28	e.	8.9		
7:47	971.4	1.2	90	ne.	5.4	1,669	829.1	0.9	0.21	29	1.89	ese.	9.1	5,100	Altitude of St. base about 700 m.
						1,750	821.0	0.9		30	1.96	ese.	9.4		
						2,000	795.8	1.1		34	2.25	se.	10.2	9,800	
7:56	971.6	1.1	89	ne.	11.2	2,110	785.0	1.1	−0.45	36	2.38	se.	10.5		
						2,250	771.4	0.4		36	2.26	se.	10.9	11,000	
						2,500	747.9	−1.8		36	1.89	sse.	11.5		
8:07	971.6	1.1	89	ne.	6.3	2,609	729.3	−1.9	0.51	36	1.88	sse.	12.0		
						2,750	724.5	−2.2		39	1.99	sse.	12.3		
						3,000	702.1	−3.5		51	2.33	s.	14.0		
						3,250	680.0	−4.8		64	2.61	s.	15.6		
						3,500	658.9	−6.1		76	2.77	ssw.	17.2		
8:15	971.7	1.1	89	ne.	6.3	3,634	647.4	−6.8	0.50	83	2.86	ssw.	18.1	2,100	
						3,500	658.9	−6.2		85	3.08	ssw.	17.7		
						3,250	680.0	−5.0		90	3.61	ssw.	16.9		
						3,000	701.7	−3.8		94	4.17	s.	16.2		Altitude of St. base about 600 m.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 25, 1918—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
8:41	971.9	1.3	89	ne.	4.5	2,780	721.4	−2.4	−3.87	98	4.74	s.	15.5	11,200	
8:46	971.9	1.4	89	nne.	4.5	2,750	724.2	−4.0		83	3.63	s.	15.6		
						2,669	731.5	−7.1	1.24	44	1.47	s.	15.9		
						2,500	747.4	−5.0		41	1.64	s.	14.8	14,800	
						2,250	771.4	−1.9		37	1.93	sse.	13.2		
9:02	972.0	1.3	88	ene.	5.4	2,016	794.4	1.0	−0.99	33	2.17	se.	11.7		
9:04	972.0	1.3	88	ene.	4.9	2,000	795.8	−0.1		31	1.88	se.	10.0		
						1,885	807.5	−0.3	0.60	31	1.85	se.	9.8		
						1,750	821.0	0.5		31	1.03	se.	9.5	10,000	
						1,500	847.0	2.0		30	2.12	ese.	8.9		
9:19	972.0	1.2	90	ene.	5.8	1,289	869.5	3.3	−0.47	29	2.24	e.	8.4		
						1,250	873.9	3.1		30	2.29	e.	8.3	8,000	
9:27	972.0	1.2	90	ene.	5.4	1,096	890.4	2.4	−4.03	34	2.47	ene.	7.4		
						1,000	901.5	−1.3		80	4.38	ne.	7.4		
9:29	972.0	1.3	89	ene.	5.4	962	905.4	−2.8	0.51	98	4.74	ne.	7.4		
						750	930.0	−1.7		98	5.19	ne.	7.4	1,100	Altitude of St. base about 650 m
9:40	972.0	1.4	89	ene.	5.4	548	953.9	−0.7	1.45	98	5.64	ne.	7.4		
						500	959.7	0.0		95	5.80	ne.	6.8		
9:44	972.0	1.5	88	ne.	5.4	396	972.0	1.5		88	5.99	ne.	5.4		10/10 St., ne.

October 29, 1918.

A. M.															
7:19	959.4	0.6	93	n.	2.2	396	959.4	0.6		93	5.93	n.	2.2		Few Ci., wnw.; 4/10 A.Cu., nnw.
7:20	959.4	0.6	93	n.	2.2	500	947.5	4.0		69	5.61	n.	9.0		
						514	945.5	4.5	−3.31	66	5.56	n.	9.9	0	
7:44	959.8	0.4	95	nnw.	2.2	750	919.0	4.4		49	4.10	nnw.	9.4		
						950	896.4	4.4	0.02	35	2.93	nnw.	8.9	1,100	
						1,000	891.3	4.1		34	2.78	nnw.	9.1		
						1,250	864.4	2.7		31	2.30	nnw.	10.1	1,900	
						1,500	838.3	1.2		27	1.80	nnw.	11.1		
8:14	960.3	1.9	88	nw.	2.7	1,586	829.5	0.7	0.58	26	1.67	nnw.	11.5		
						1,750	812.8	−0.1		33	2.00	nnw.	11.1	3,200	
						2,000	788.0	−1.3		45	2.47	nw.	10.5		
8:32	960.5	2.3	82	nnw.	2.2	2,096	778.6	−1.8	0.49	49	2.58	nw.	10.2		
						2,250	764.1	−2.1		41	2.10	nw.	9.1		
						2,500	740.8	−2.7		28	1.37	nw.	7.2	5,800	
9:04	960.8	4.6	72	n.	2.7	2,636	728.2	−3.0	0.22	21	1.00	nw.	6.2	6,200	1/10 Ci., wnw.; 2/10 A.Cu., nnw.
						2,750	717.9	−3.7		19	0.85	nw.	6.6		
						3 000	695.8	−5.2		15	0.59	nw.	7.5		
10:17	961.1	8.1	59	nne.	2.7	3,162	681.4	−6.2	0.54	13	0.47	nw.	8.1		
						3,000	695.8	−5.4		13	0.50	nw.	7.8	3,700	
						2,750	717.9	−4.3		14	0 60	nnw.	7.3		
						2 500	740.8	−3.1		14	0.66	nnw.	6.8		
10:34	961.1	8.4	56	nnw.	2.7	2,395	750.3	−2.6	0.45	14	0.69	nnw.	6.6		
						2,250	764.1	−2 0		15	0.78	nnw.	7.8		
						2,000	788 7	−0.8		17	0.97	nnw.	9.8	2,800	
10:55	961.1	8 7	56	nw.	2.2	1,991	789.4	−0 8	0.59	17	0.97	nnw.	9.9		
						1,750	813.5	0.6		20	1.28	nw.	10.3		
						1,500	839.4	2.1		23	1.64	nw.	10.6		Few Ci., wnw.; 1/10 A.Cu., nnw.
11:11	961.0	9.2	55	wnw.	3.1	1,312	859.0	3.2	0.44	25	1.92	wnw.	10.9	420	
						1,250	866.0	3.5		26	2.04	wnw.	10 8		
						1,000	892.7	4.6		28	2.37	wnw.	10.6		
						750	920.4	5.7		31	2 84	wnw.	10.4		
11:20	960 9	9.3	54	wnw.	3.1	608	936.4	6.3	1.56	32	3.06	wnw.	10.3		
						500	949.0	8.0		42	4.51	wnw.	6.6		
11:23	960.9	9.6	52	wnw.	3.1	396	960.9	9.6		52	6.21	wnw.	3.1		Few Ci., wnw.; 1/10 A.Cu., nnw.

October 30, 1918 (No. 1).

A. M.															
7:29	967.9	1.0	94	nw.	4.9	396	967.9	1.0		94	6.18	nw.	4.9		Few A Cu., wnw.
7:32	967.9	1.4	92	nw.	4.9	500	955.3	2.2		84	6.01	nw.	6.8		
						677	935.0	4.1	−1.10	67	5.49	nnw.	20.1		
						750	926.8	3.6		69	5.46	nnw.	20.7	0	
						1,000	898.5	1.7		76	5.25	nw.	22.6		
7:39	968.0	1.7	90	nw.	4.9	1,093	888.1	1.0	0.74	78	5.12	nw.	23.3	2,100	
						1,250	870.7	0.3		72	4.49	nw.	22.2		
						1,500	844.0	−0.8		64	3.65	nw.	20.5		
						1,750	818.0	−1.9		55	2.87	nw.	18.9		
7:50	968.1	1.9	90	nw.	4.9	1,775	815.7	−2.0	0.44	54	2.79	nw.	18.7		
						2,000	792.8	−3.2		50	2.34	nw.	18.8		
						2,250	768.4	−4.5		45	1.89	nw.	18.9	5,000	
8:02	968.2	2.2	88	nw.	4.9	2,360	757.6	−5.1	0.53	43	1.71	nw.	19.0		1/10 A.Cu., wnw.
						2,500	744.0	−6.1		42	1.54	nw.	18.9	6,200	
						2,750	720.9	−7.8		40	1.26	nw.	18.6	7,000	
						3,000	698.3	−9.5		37	1.00	nw.	18.3		
8:42	968.7	3.5	83	nw.	4.0	3,030	695.8	−9.7	0.66	37	0.99	nw.	18.3	8,000	
						3,000	698.3	−9.5		37	1.00	nw.	18.4		
						2,750	720.9	−8.0		39	1.21	nw.	19.2		
						2,500	744.0	−6.4		41	1.46	nw.	20.0		
						2,250	768.7	−4.9		42	1.70	nw.	20.8	4,900	
						2,000	793.5	−3.3		44	2.04	nw.	21.6		
9:17	968.9	4.9	76	nw.	4.5	1,983	795.3	−3 2	0 60	44	2.06	nw.	21.7		
						1,750	819 0	−1.8		46	2.42	nw.	23.5	3,600	
						1,500	844.8	−0.3		48	2.86	nnw.	25.4	2,100	1/10 Ci.St., wnw.; few A.Cu., wnw.
						1,250	871.6	1.2		50	3.33	nnw.	27.4		
9:44	968.9	5.6	77	nw.	5.4	1,155	881.9	1.8	−0.20	51	3.55	nnw.	28.1		
						1,000	899.1	1.5		65	4.43	nnw.	21.3		

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 30, 1918 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
9:54	968.9	6.0	76	nw.	5.8	810	920.8	1.1	1.14	82	5.43	nnw.	13.1		
						750	927.8	1.8		81	5.64	nnw.	12.0	320	
						500	956.5	4.6		75	6.36	nw.	7.3		
10:05	968.9	5.8	73	nw.	5.4	396	968.9	5.8		73	6.73	nw.	5.4		1/10 Ci.St., wnw.; few A.Cu., wnw.; few Cu., wnw.

October 30, 1918 (No. 2).

A. M.															
10:47	968.9	6.6	69	nnw.	7.2	396	968.9	6.6		69	6.73	nnw.	7.2		2/10 Ci.St., wnw.; 5/10 A.Cu., wnw.; few St.Cu., nw.
						500	956.4	5.4		72	6.46	nnw.	8.6		
						750	927.5	2.7		79	5.95	nw.	12.0		
10.55	968.9	6.7	68	nnw.	6.7	776	924.7	2.4	1.11	80	5.81	nw.	12.3	540	
						1,000	899.0	2.3		73	5.26	nw.	13.5		Altitude of St.Cu. base about 1,100 m.
						1,250	871.5	0.4		65	4.09	nw.	14.7		
11:09	968.9	7.4	69	nw.	6.3	1,250	870.9	0.4	0.41	65	4.09	nw.	14.8	2,300	
						1,500	844.9	− 1.1		69	3.71	nw.	16.4		
						1,750	818.9	− 2.7		73	3.56	nw.	18.0	4,000	
11:28	968.8	7.4	68	nw.	8.0	1,828	811.0	− 3.2	0.63	74	3.46	nw.	18.5		
						2,000	793.4	− 4.4		74	3.12	nw.	18.6		
						2,250	768.4	− 6.1		75	2.74	nw.	18.7	5,900	
						2,500	744.2	− 7.7		76	2.42	nw.	18.9		
11:57	968.6	7.7	66	nnw.	7.6	2,700	725.4	− 9.1	0.68	77	2.16	nw.	19.0	7,300	5/10 Ci.St., wnw.; 2/10 St.Cu., nw.
						2,750	720.8	− 9.4		76	2.08	nw.	18.8		
						3,000	698.0	−11.1		75	1.76	nw.	17.7	8,000	
						3,250	675.6	−12.7		75	1.53	nw.	16.6	8,800	
P. M.															
12:36	968.6	7.6	65	nw.	6.3	3,405	661.9	−13.7	0.68	74	1.38	nw.	15.9	8,300	1/10 A.Cu., wnw.; 9/10 St.Cu., nw.
						3,250	675.6	−12.6		78	1.60	nw.	16.3		
						3,000	697.5	−10.9		85	2.03	nw.	16.8		
12:48	968.6	7.7	65	nw.	7.6	2,851	710.8	− 9.9	0.53	89	2.33	nw.	17.2		
						2,750	719.8	− 9.5		90	2.44	nw.	17.4		
						2,500	743.5	− 8.0		93	2.88	nw.	17.9		
						2,250	767.6	− 6.7		97	3.37	nw.	18.4		
1:07	968.6	7.1	67	nw.	5.8	2,009	791.9	− 5.4	0.51	100	3.88	nw.	18.8		Sprinkling rain from 1:12 to 1:44 p. m.
						2,000	792.6	− 5.4		100	3.88	nw.	18.7		
						1,750	818.0	− 4.0		98	4.28	nw.	16.9	680	
						1,500	844.4	− 2.8		97	4.69	nw.	15.0		
						1,250	871.5	− 1.5		95	5.12	nw.	13.2	0	Altitude of St. base about 1,100 m.
1:33	968.8	6.3	78	nw.	6.3	1,066	891.9	− 0.5	1.03	94	5.51	nw.	11.8		
						1,000	899.0	0.2		91	5.64	nw.	12.4		9/10 St., nw.; few St.Cu., nw.
						750	927.5	2.8		80	5.98	nw.	14.6		
1:47	968.8	6.7	73	nnw.	6.3	708	932.4	3.2	1.06	78	6.00	nw.	15.0		
						500	956.4	5.4		74	6.64	nw.	10.1		8/10 St., nw.
1:51	968.9	6.5	72	nw.	7.6	396	968.9	6.5		72	6.97	nw.	7.6		2/10 St.Cu., nw.

October 30, 1918 (No. 3).

P. M.															
2:36	968.9	6.8	68	nw.	7.6	396	968.9	6.8		68	6.72	nw.	7.6		10/10 St.Cu., nw.
						500	956.5	5.7		70	6.41	nw.	9.1		
						750	927.9	2.9		75	5.65	nw.	12.8		
2:41	968.9	6.7	69	nw.	9.8	772	925.2	2.7	1.06	75	5.56	nw.	13.1	0	
						1,000	899.5	0.4		87	5.47	nw.	13.8		
2:56	968.9	6.4	68	nnw.	6.7	1,222	875.0	− 1.8	1.00	98	5.15	nw.	14.5	1,390	Altitude of St.Cu. base about 1,250 m.
						1,250	872.0	− 1.9		97	5.06	nw.	14.7		
						1,500	845.0	− 3.2		89	4.17	nw.	17.0		
						1,750	818.8	− 4.5		82	3.44	nw.	19.2	3,500	1/10 Ci.St., nw.; 8/10 St.Cu., nw.
3:15	969.0	6.9	68	nnw.	7.2	1,807	812.7	− 4.8	0.51	80	3.26	nw.	19.7		
						2,000	792.7	− 6.0		80	2.94	nw.	19.1		
						2,250	768.0	− 7.5		80	2.58	nw.	18.3	5,500	
3:35	969.1	6.9	67	n.	4.9	2,434	750.1	− 8.6	0.61	80	2.35	nw.	17.8		
						2,500	743.6	− 9.1		80	2.25	nw.	18.2	6,800	
						2,750	719.7	−10.8		80	1.94	nw.	19.6	8,000	
						3,000	696.7	−12.5		80	1.66	nw.	21.0		9/10 St.Cu., nw.
4:05	969.2	6.7	64	nnw.	5.8	3,186	679.9	−13.8	0.70	80	1.47	nw.	22.1	8,500	
						3,000	696.7	−12.5		80	1.66	nw.	21.8		
4:24	969.4	6.2	68	nnw.	7.2	2,783	716.8	−10.9	0.42	80	1.91	nw.	21.4	5,900	
						2,750	719.7	−10.8		80	1.94	nw.	21.5		
						2,500	743.6	− 9.7		82	2.19	nw.	21.8		
4:41	969.5	6.0	72	n.	4.5	2,278	765.3	− 8.8	0.84	83	2.40	nw.	22.2	4,300	
						2,250	768.0	− 8.6		83	2.44	nw.	21.8		
						2,000	793.1	− 6.5		82	2.89	nw.	18.3		
4:52	969.5	5.6	76	n.	7.2	1,811	812.7	− 4.9	0.67	81	3.28	nw.	15.6		Few Ci.St., nw.; few A.Cu., nw.; 5/0 St.Cu., nw.
						1,750	818.8	− 4.5		81	3.39	nw.	15.4	2,600	
						1,500	845.0	− 2.8		78	3.78	nw.	14.7		
5:12	969.7	5.5	74	n.	2.7	1,305	866.4	− 1.5	0.76	77	4.15	nw.	14.1	615	
						1,250	872.1	− 1.1		77	4.29	nw.	13.8		Rain began 5:26 p. m. and continued at end of flight.
						1,000	900.3	0.8		78	5.05	nw.	12.2		
5:25	969.7	5.3	78	nnw...	2.7	790	923.9	2.4	0.66	79	5.74	nw.	10.9	425	
						750	928.9	2.7		79	5.86	nw.	10.3		
						500	957.7	4.3		80	6.65	nnw.	6.2		
5:30	969.8	5.0	80	nnw.	4.5	396	969.8	5.0		80	6.98	nnw.	4.5		10/10 St., nw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, October, 1918*—Continued.

October 31, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:29	974.6	−0.4	89	nw.	6.7	396	974.6	− 0.4	.....	89	5.26	nw.	6.7	.....	2/10 A.Cu., nnw.; 6/10 St.Cu., nnw.
						500	961.8	− 1.2	.....	90	4.98	nw.	9.0	.....	
7:34	974.7	−0.4	85	nw.	5.4	721	935.8	− 2.8	0.74	93	4.50	nw.	13.9	0	
						750	932.0	− 2.8	.....	89	4.31	nw.	14.0	1,400	
7:42	974.8	−0.3	85	nw.	8.0	929	911.5	− 2.6	−0.10	63	3.10	nw.	14.9	.....	9/10 St.Cu., nnw.
						1,000	903.0	− 3.3	.....	66	3.06	nw.	14.9	.....	
						1,250	875.0	− 5.7	.....	77	2.91	nw.	15.0	.....	
						1,500	847.3	− 8.2	.....	88	2.68	nnw.	15.1	.....	
						1,750	820.9	−10.6	.....	99	2.44	nnw.	15.2	3,600	Altitude of St.Cu. base about 1,850 m.
8:06	975.1	−0.4	85	nw.	6.7	1,780	817.7	−10.9	0.98	100	2.39	nnw.	15.2	.....	
						2,000	795.3	− 9.5	.....	89	2.41	nnw.	15.0	.....	
8:21	975.2	−0.4	85	nnw.	6.7	2,243	770.2	− 8.0	−0.63	77	2.39	nnw.	14.8	.....	
						2,250	770.0	− 8.0	.....	77	2.39	nnw.	14.9	.....	
8:34	975.4	−0.4	81	nw.	8.0	2,485	746.8	− 7.9	−0.04	63	1.97	nnw.	17.2	8,300	
						2,500	745.5	− 8.0	.....	63	1.95	nnw.	17.2	.....	
						2,750	721.9	− 9.1	.....	58	1.63	nnw.	17.9	10,000	
						3,000	699.2	−10.3	.....	53	1.34	nnw.	18.5	.....	
8:57	975.7	−0.2	82	nnw.	5.4	3,161	684.4	−11.1	0.47	50	1.18	nnw.	18.9	13,500	
						3,250	677.2	−11.5	.....	51	1.16	nnw.	19.1	.....	9/10 St.Cu., nnw.
						3,500	655.5	−12.5	.....	54	1.12	nnw.	19.7	.....	
9:13	975.8	0.0	81	nnw.	5.4	3,750	634.0	−13.5	.....	57	1.08	nnw.	20.2	16,500	
						3,837	626.8	−13.9	0.41	58	1.06	nnw.	20.4	.....	
						4,000	613.8	−14.4	.....	54	0.94	nnw.	21.6	.....	
						4,250	594.2	−15.1	.....	47	0.77	nnw.	23.5	15,400	
						4,500	574.8	−15.8	.....	41	0.63	nnw.	25.4	.....	
9:51	976.0	0.5	86	nnw.	6.3	4,577	568.8	−16.0	0.34	39	0.58	nnw.	26.0	21,500	
						4,500	574.8	−15.7	.....	40	0.62	nnw.	25.7	.....	
						4,250	594.2	−14.7	.....	42	0.71	nnw.	24.6	.....	
						4,000	613.8	−13.7	.....	44	0.82	nnw.	23.6	.....	
						3,750	634.0	−12.7	.....	47	0.96	nnw.	22.5	.....	
						3,500	655.4	−11.7	.....	49	1.09	nnw.	21.4	.....	
10:10	976.0	1.4	82	nnw.	4.9	3,258	676.7	−10.7	0.35	51	1.24	nnw.	20.4	10,900	
						3,250	677.2	−10.7	.....	51	1.24	nnw.	20.4	.....	
						3,000	699.7	− 9.8	.....	55	1.45	nnw.	20.1	.....	
						2,750	722.3	− 8.9	.....	59	1.69	nnw.	19.8	.....	
						2,500	745.7	− 8.0	.....	63	1.95	nnw.	19.5	8,400	
						2,250	770 0	− 7.1	.....	67	2.24	nnw.	19.3	.....	
						2,000	795.3	− 6.3	.....	71	2.55	nnw.	19.0	.....	
11:07	976.0	1.8	80	nnw.	4.9	1,928	803.3	− 6.0	−3.65	72	2.65	nnw.	18.9	.....	
11:11	975.9	1.8	80	nnw.	4.9	1,810	815.3	−10.3	0.82	100	2.53	nnw.	12.3	5,200	
						1,750	821.7	− 9.8	.....	98	2.59	nnw.	12.3	.....	
						1,500	848.5	− 7.7	.....	92	2.93	nnw.	12.1	.....	
						1,250	876.3	− 5.7	.....	85	3.21	nnw.	12.0	.....	
11:21	975.9	2.7	80	nw.	5.8	1,094	893.9	− 4.4	0.75	81	3.42	nnw.	11.9	1,500	
						1,000	904.4	− 3.7	.....	83	3.72	nnw.	10.9	.....	Altitude of St.Cu. base about 1,650 m.
						750	933.3	− 1.8	.....	88	4.63	nw.	8.3	.....	
11:40	975.8	2.2	74	nw.	4.5	708	938.4	− 1.5	1.32	89	4.80	nw.	7.8	0	
						500	962.8	1.2	.....	80	5.34	nw.	5.6	.....	
11:5	975.8	2.6	75	nw.	4.5	396	975.8	2.6	.....	75	5.53	nw.	4.5	.....	8/10 St.Cu., nnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918.*

November 1, 1918, series (No. 1).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*volts.*	
7:23	973.0	−1.8	94	s.	3.6	396	973.0	− 1.8	.....	94	4.94	s.	3.6	.....	Cloudless.
7:26	973.0	−1.6	96	sse.	3.6	483	962.6	5.6	−8.51	58	5.28	ssw.	.....	.....	
.....	.....	.....	.....	.....	.....	500	960.5	5.6	.....	58	5.28	ssw.	.....	.....	
.....	.....	.....	.....	.....	.....	750	931.5	5.5	.....	58	5.24	ssw.	.....	1,200	
.....	.....	.....	.....	.....	.....	1,000	903.6	5.5	.....	57	5.15	sw.	.....	3,700	
.....	.....	.....	.....	.....	.....	1,250	876.6	5.4	.....	57	5.11	sw.	.....	.....	
7:58	973.0	−0.1	89	ssw.	3.6	1,346	866.2	5.4	0.02	57	5.11	sw.	.....	.....	
.....	.....	.....	.....	.....	.....	1,500	850.0	4.6	.....	64	5.43	wsw.	.....	4,500	
8:10	973.0	0.3	86	ssw.	6.7	1,594	840.4	4.1	0.52	69	5.65	wsw.	.....	.....	
.....	.....	.....	.....	.....	.....	1,750	824.2	3.8	.....	65	5.21	wsw.	.....	5,200	
.....	.....	.....	.....	.....	.....	2,000	799.4	3.3	.....	58	4.49	w.	.....	.....	
.....	.....	.....	.....	.....	.....	2,250	775.2	2.8	.....	51	3.81	w.	.....	8,000	
.....	.....	.....	.....	.....	.....	2,500	751.5	2.3	.....	45	3.24	wnw.	.....	.....	
8:52	973.0	2.0	80	s.	4.5	2,529	748.8	2.2	0.20	44	3.15	wnw.	.....	.....	
.....	.....	.....	.....	.....	.....	2,750	728.0	0.6	.....	48	3.06	wnw.	.....	.....	
.....	.....	.....	.....	.....	.....	3,000	705.1	− 1.2	.....	52	2.88	wnw.	.....	11,500	
.....	.....	.....	.....	.....	.....	3,250	683.0	− 3.0	.....	57	2.85	wnw.	.....	.....	
.....	.....	.....	.....	.....	.....	3,500	662.0	− 4.8	.....	62	2.53	wnw.	.....	.....	
.....	.....	.....	.....	.....	.....	3,750	641.5	− 6.7	.....	66	2.29	nw.	.....	16,000	
.....	.....	.....	.....	.....	.....	4,000	621.8	− 8.5	.....	71	2.10	nw.	.....	.....	
.....	.....	.....	.....	.....	.....	4,250	602.0	−10.3	.....	75	1.90	nw.	.....	.....	
9:38	972.7	5.0	75	s.	2.2	4,403	589.9	−11.4	0.73	78	1.79	nw.	27.9	.....	
9:42	972.7	5.3	75	s.	2.7	4,479	584.8	−10.9	−0.20	62	1.48	nw.	29.5	17,200	Cloudless.
10:01	972.6	6.1	70	s.	3.1	4,284	600.3	−10.4	0.75	79	1.98	nw.	23.3	.....	
.....	.....	.....	.....	.....	.....	4,250	603.0	−10.1	.....	78	2.00	nw.	23.1	.....	
.....	.....	.....	.....	.....	.....	4,000	623.4	− 8.3	.....	74	2.23	nw.	21.6	10,000	
.....	.....	.....	.....	.....	.....	3,750	643.5	− 6.4	.....	70	2.49	nw.	20.1	.....	
.....	.....	.....	.....	.....	.....	3,500	663.7	− 4.5	.....	66	2.77	nw.	18.6	.....	Few Ci., nw.
.....	.....	.....	.....	.....	.....	3,250	684.0	− 2.7	.....	62	3.03	wnw.	17.1	.....	
.....	.....	.....	.....	.....	.....	3,000	705.7	− 0.8	.....	58	3.31	wnw.	15.6	9,800	
.....	.....	.....	.....	.....	.....	2,750	728.0	1.0	.....	53	3.48	wnw.	14.1	.....	
.....	.....	.....	.....	.....	.....	2,500	751.5	2.9	.....	49	3.69	wnw.	12.6	7,500	
10:49	972.4	7.0	67	s.	7.2	2,309	769.8	4.4	0.48	46	3.85	wnw.	11.5	.....	
.....	.....	.....	.....	.....	.....	2,250	775.2	4.7	.....	46	3.93	wnw.	11.3	.....	
.....	.....	.....	.....	.....	.....	2,000	799.4	5.9	.....	47	4.37	w.	10.4	.....	
.....	.....	.....	.....	.....	.....	1,750	824.2	7.1	.....	49	4.94	sw.	9.5	4,200	
.....	.....	.....	.....	.....	.....	1,500	850.0	8.3	.....	50	5.48	ssw.	8.6	.....	
11:05	972.3	7.8	64	ssw.	5.8	1,483	851.5	8.4	−0.90	50	5.51	ssw.	8.5	.....	
.....	.....	.....	.....	.....	.....	1,250	876.2	6.3	.....	61	5.83	ssw.	9.6	3,600	
.....	.....	.....	.....	.....	.....	1,000	903.0	4.0	.....	72	5.85	ssw.	10.9	.....	
11:18	972.2	8.6	64	ssw.	8.5	872	917.3	2.9	1.16	78	5.87	ssw.	11.5	.....	
.....	.....	.....	.....	.....	.....	750	930.8	4.3	.....	74	6.15	ssw.	10.0	425	
.....	.....	.....	.....	.....	.....	500	959.6	6.2	.....	66	6.26	ssw.	7.0	.....	
11:29	972.2	8.4	62	ssw.	5.8	396	972.2	8.4	.....	62	6.83	ssw.	5.8	.....	

November 1, 1918, series (No. 2).

P. M.															
12:25	971.3	9.6	64	ssw.	7.2	396	971.3	9.6	.....	64	7.65	ssw.	7.2	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	958.8	8.3	.....	66	7.23	ssw.	6.9	.....	
12:44	970.8	9.9	64	s.	5.8	684	937.5	5.9	1.23	70	6.50	ssw.	6.2	0	
.....	.....	.....	.....	.....	.....	750	930.0	5.4	.....	72	6.46	ssw.	7.1	.....	
.....	.....	.....	.....	.....	.....	1,000	901.3	3.6	.....	80	6.33	sw.	10.6	.....	
1:02	970.3	11.1	63	ssw.	5.4	1,022	899.0	3.4	0.74	81	6.32	sw.	10.9	.....	
.....	.....	.....	.....	.....	.....	1,250	874.0	7.2	.....	61	6.20	wsw.	9.6	.....	
1:11	970.2	11.6	63	ssw.	6.7	1,372	861.7	9.2	−1.66	51	5.82	w.	9.0	.....	
.....	.....	.....	.....	.....	.....	1,500	848.5	8.7	.....	47	5.29	w.	9.5	4,900	
.....	.....	.....	.....	.....	.....	1,750	823.3	7.7	.....	42	4.41	wnw.	10.5	.....	
.....	.....	.....	.....	.....	.....	2,000	798.2	6.7	.....	37	3.92	wnw.	11.4	6,000	
1:35	969.9	11.6	66	ssw.	7.6	2,135	785.1	6.2	0.39	34	3.22	wnw.	11.9	.....	
.....	.....	.....	.....	.....	.....	2,250	773.5	5.3	.....	36	3.21	wnw.	13.2	.....	
.....	.....	.....	.....	.....	.....	2,500	749.4	3.4	.....	39	3.04	wnw.	16.0	8,500	
.....	.....	.....	.....	.....	.....	2,750	726.3	1.5	.....	42	2.86	wnw.	18.9	.....	
.....	.....	.....	.....	.....	.....	3,000	704.2	−0.4	.....	46	2.72	nw.	21.7	.....	
.....	.....	.....	.....	.....	.....	3,250	683.0	−2.3	.....	49	2.47	nw.	24.6	10,500	
2:07	969.6	11.8	65	ssw.	7.2	3,500	662.3	−4.2	.....	53	2.28	nw.	27.4	.....	
.....	.....	.....	.....	.....	.....	3,683	647.3	−5.6	0.76	55	2.10	nw.	29.5	12,000	
.....	.....	.....	.....	.....	.....	3,500	662.3	−4.2	.....	52	2.24	nw.	26.6	.....	
.....	.....	.....	.....	.....	.....	3,250	683.6	−2.3	.....	48	2.42	nw.	22.6	.....	
.....	.....	.....	.....	.....	.....	3,000	705.4	−0.4	.....	44	2.60	wnw.	18.6	8,700	
2:42	969.6	11.6	64	ssw.	3.6	2,750	728.0	1.5	.....	41	2.79	wnw.	14.6	.....	
.....	.....	.....	.....	.....	.....	2,650	737.1	2.3	0.50	39	2.81	wnw.	13.0	.....	
2:52	969.6	11.7	64	ssw.	6.7	2,500	750.8	3.0	.....	46	3.49	nnw.	12.7	5,900	
.....	.....	.....	.....	.....	.....	2,350	765.1	3.8	0.68	53	4.25	wnw.	12.4	.....	
.....	.....	.....	.....	.....	.....	2,250	774.5	4.5	.....	51	4.29	wnw.	12.0	.....	
.....	.....	.....	.....	.....	.....	2,000	798.6	6.2	.....	46	4.36	wnw.	11.1	.....	
.....	.....	.....	.....	.....	.....	1,750	823.3	7.9	.....	40	4.26	wnw.	10.1	3,800	
.....	.....	.....	.....	.....	.....	1,500	848.5	9.6	.....	35	4.18	wnw.	9.2	.....	
3:12	969.5	12.3	63	ssw.	8.0	1,394	859.3	10.3	−0.90	33	4.13	wnw.	8.8	.....	
.....	.....	.....	.....	.....	.....	1,250	873.7	9.0	.....	47	5.40	w.	8.2	.....	
.....	.....	.....	.....	.....	.....	1,000	900.4	6.8	.....	73	7.21	sw.	7.1	.....	
3:24	969.3	12.0	64	ssw.	6.3	937	907.9	6.2	0.91	79	7.49	ssw.	6.8	755	
.....	.....	.....	.....	.....	.....	750	929.0	7.8	.....	76	8.04	ssw.	7.4	.....	
3:35	969.2	12.0	65	ssw.	7.2	650	940.1	8.8	1.34	75	8.50	ssw.	7.7	0	Cloudless.
.....	.....	.....	.....	.....	.....	500	957.0	10.8	.....	69	8.94	ssw.	6.6	.....	
3:40	969.2	12.2	65	ssw.	5.8	396	969.2	12.2	.....	65	9.24	ssw.	5.8	.....	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 1, 1918, series (No. 3).

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	Volts.	
6:24	968.9	8.6	83	s.	4.5	396	968.9	8.6	.....	83	9.27	s.	4.5	.....	Cloudless.
						500	957.3	8.6	.....	81	9.05	s.	6.5	.....	
6:33	968.9	8.4	82	s.	4.0	634	942.2	8.7	−0.04	78	8.78	s.	9.0	.....	
						750	928.8	8.5	.....	73	8.10	s.	7.5	565	
7:44	969.1	7.0	90	sse.	3.1	927	908.8	8.0	0.24	65	6.97	ssw.	5.1	980	
						1,000	900.9	8.9	.....	59	6.73	ssw.	3.8	1,600	
8:57	969.2	5.9	91	sse.	3.6	1,080	892.5	10.0	−0.72	51	6.26	ssw.	2.1	1,300	
						1,000	900.9	10.0	.....	54	6.63	ssw.	3.1	860	
						750	928.8	9.9	.....	64	7.81	s.	6.3	260	
9:43	969.2	5.8	93	sse.	3.6	505	956.5	9.8	−3.76	74	8.97	s.	9.5	.....	
9:45	969.2	5.7	93	sse.	3.6	396	969.2	5.7	.....	93	8.52	sse.	3.6	.....	Cloudless.

November 1, 2, 1918, series (No. 4).

P. M.															
10:40	969.2	5.2	92	sse.	2.7	396	969.2	−5.2	.....	92	8.14	sse.	2.7	.....	Cloudless.
						500	956.7	7.3	.....	86	8.80	s.	5.9	.....	
10:47	969.2	5.2	92	sse.	3.1	577	948.1	8.9	−2.04	81	9.23	s.	8.2	0	
						750	928.4	8.5	.....	83	9.21	ssw.	10.6	.....	
10:55	969.2	4.9	92	sse.	3.1	900	911.9	8.2	0.22	85	9.24	ssw.	12.7	1,100	
						1,000	900.8	8.5	.....	70	7.70	ssw.	10.0	.....	
11:43	969.2	4.3	93	sse.	4.0	1,188	880.6	9.1	−0.31	43	4.97	sw.	4.9	2,400	
						1,250	873.9	8.8	.....	43	4.87	sw.	4.8	2,200	
						1,500	847.7	7.8	.....	44	4.66	sw.	4.3	.....	
A. M.															
12:15	969.1	4.0	94	sse.	4.0	1,747	822.8	6.8	0.32	45	4.45	sw.	3.8	.....	
						1,500	847.7	7.4	.....	55	5.66	sw.	6.2	.....	
						1,250	873.9	8.0	.....	66	7.08	ssw.	8.6	.....	
						1,000	900.8	8.5	.....	76	8.44	ssw.	11.0	920	
12:40	969.0	3.7	94	sse.	4.0	887	913.2	8.8	0.50	81	9.18	ssw.	12.1	.....	
						750	928.4	9.5	.....	82	9.73	ssw.	11.7	.....	
12:48	969.0	3.7	94	sse.	4.5	609	944.2	10.2	−0.31	83	10.33	ssw.	11.3	0	
						500	957.0	6.9	.....	89	8.86	s.	8.0	.....	
12:52	968.9	3.7	94	sse.	4.9	396	968.9	3.7	.....	94	7.48	sse.	4.9	.....	Cloudless.

November 2, 1918, series (No. 5).

A. M.															
1:36	968.9	3.6	96	sse.	4.9	396	968.9	3.6	.....	96	7.59	sse.	4.9	.....	Cloudless.
						500	956.8	6.8	.....	88	8.69	s.	7.3	.....	
1:43	968.9	3.4	95	sse.	4.9	624	942.4	10.5	−3.03	78	9.91	ssw.	10.2	.....	
						750	928.0	10.4	.....	73	9.21	ssw.	9.5	0	Few A.Cu., wnw.
						1,000	900.7	10.2	.....	59	7.35	sw.	7.3	1,200	
2:33	968.7	3.1	97	sse.	5.8	1,189	880.5	10.1	0.07	49	6.06	wsw.	7.2	1,700	
						1,250	873.9	9.8	.....	49	5.94	wsw.	7.0	2,100	
						1,500	847.9	8.6	.....	49	5.47	wsw.	6.0	.....	
						1,750	822.4	7.3	.....	48	4.91	wsw.	5.0	.....	
						2,000	797.7	6.1	.....	48	4.52	wsw.	4.0	.....	
3:38	968.3	2.9	95	sse.	4.9	2,062	791.7	5.8	0.53	48	4.43	wsw.	3.8	.....	
						2,000	797.7	6.2	.....	48	4.55	wsw.	3.9	.....	
						1,750	822.4	7.6	.....	47	4.91	wsw.	4.1	.....	
						1,500	847.9	9.0	.....	47	5.40	wsw.	4.3	.....	
						1,250	873.9	10.4	.....	46	5.80	wsw.	4.5	.....	
4:06	968.2	2.6	97	sse.	4.5	1,162	883.0	10.9	0.83	46	6.00	wsw.	4.6	0	
						1,000	900.7	11.0	.....	54	7.09	sw.	5.2	.....	
						750	928.0	11.3	.....	72	9.64	sw.	6.5	.....	
4:25	968.2	2.6	99	sse.	4.9	563	948.9	11.4	−0.53	76	10.24	ssw.	6.8	.....	
						500	956.2	5.9	.....	90	8.36	s.	5.6	.....	
4:29	968.2	2.6	98	sse.	4.9	396	968.2	2.6	.....	98	7.22	sse.	4.9	.....	Few A.Cu., wnw.

November 2, 1918, series (No. 6).

A. M.															
5:13	968.3	2.4	100	sse.	4.9	396	968.3	2.4	.....	100	7.26	sse.	4.9	.....	Few A.Cu., wnw.
						500	956.4	8.4	.....	87	9.59	ssw.	7.6	.....	
5:17	968.3	2.5	100	sse.	4.5	523	953.4	9.7	−5.75	84	10.11	ssw.	8.2	0	
5:42	968.5	2.6	100	sse.	4.0	732	930.0	10.4	−0.33	72	9.08	wsw.	4.5	380	1/10 A.Cu., wnw.
						750	928.3	10.4	.....	72	9.08	wsw.	4.6	810	
						1,000	900.7	9.9	.....	65	7.93	wsw.	6.0	.....	
						1,250	874.0	9.4	.....	58	6.84	sw.	7.6	.....	2/10 A.Cu., wnw.
6:59	968.9	1.8	100	sse.	2.7	1,307	868.2	9.3	0.19	57	6.68	sw.	7.8	.....	
						1,500	848.0	8.2	.....	56	6.09	sw.	7.5	.....	
						1,750	822.7	6.8	.....	55	5.43	sw.	7.2	.....	Light fog from 6:50 to 7:34 a. m.
						2,000	798.3	5.4	.....	53	4.75	ssw.	6.8	.....	
7:08	968.9	1.6	100	sse.	2.7	2,204	778.4	4.3	0.62	52	4.32	ssw.	6.5	.....	
						2,000	798.3	5.7	.....	50	4.58	ssw.	6.8	.....	
						1,750	822.7	7.4	.....	47	4.84	s.	7.2	.....	
						1,500	848.0	9.1	.....	44	5.09	s.	7.7	.....	
7:22	968.9	1.8	100	s.	3.1	1,410	857.2	9.7	−0.50	43	5.17	s.	7.8	.....	
						1,250	874.0	8.9	.....	57	6.50	s.	12.4	.....	Few Ci.St., wnw.; few A.Cu., wnw.
7:31	968.9	2.1	100	s.	3.6	1,211	878.1	8.7	0.27	61	6.86	s.	13.6	2,000	
						1,000	900.7	9.3	.....	67	7.85	s.	10.0	.....	
						750	928.3	9.9	.....	74	9.03	ssw.	5.8	.....	
7:43	968.9	2.7	100	s.	2.7	619	943.0	10.3	−0.31	78	9.77	ssw.	3.6	0	
						500	956.8	6.6	.....	88	8.58	ssw.	2.9	.....	
7:54	968.9	3.3	97	s.	2.2	396	968.9	3.3	.....	97	7.51	s.	2.2	.....	Few Ci.St., wnw.; few A.Cu., wnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 2, 1918, series (No. 7).

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m.p.s.*	*m.*	*mb.*	°C.		%	*mb.*		*m.p.s.*	*Volts.*	
8:34	968.9	5.0	97	se.	1.8	396	968.9	5.0	.....	97	8.46	se.	1.8	.....	Few Cl.St., wnw.; few A.Cu., wnw.
						500	957.0	6.7	.....	90	8.83	sse.	3.3	0	
9:27	968.8	8.0	86	s.	1.8	738	929.7	10.5	−1.61	73	9.27	s.	6.6	425	
						750	930.0	10.5	.....	73	9.27	s.	6.6	.....	
						1,000	902.8	10.9	.....	63	8.22	s.	7.0	.....	
						1,250	875.6	11.2	.....	53	7.05	ssw.	7.4	.....	
						1,500	849.0	11.6	.....	43	5.87	ssw.	7.8	.....	
9:48	968.7	8.6	86	ssw.	2.7	1,576	840.9	11.7	−0.14	40	5.50	ssw.	7.9	1,700	
						1,750	823.5	11.0	.....	38	4.99	ssw.	9.3	1,900	
10:10	968.5	9.8	82	s.	3.1	1,958	803.1	10.1	0.42	35	4.33	sw.	10.9	.....	
						2,000	799.6	9.7	.....	36	4.33	sw.	10.7	.....	2/10 Cl., w.
						2,250	776.0	7.7	.....	41	4.31	sw.	9.3	2,600	
						2,500	752.7	5.6	.....	47	4.28	wsw.	8.0	.....	
11:02	968.2	11.8	76	sse.	3.1	2,615	741.7	4.6	0.84	49	4.16	wsw.	7.4	.....	
						2,750	729.4	3.5	.....	52	4.08	wsw.	8.3	.....	
						3,000	707.0	1.4	.....	56	3.79	wsw.	9.9	.....	
						3,250	685.4	− 0.7	.....	61	3.57	wsw.	11.5	3,700	6/10 Cl.St., w.
						3,500	664.7	− 2.7	.....	66	3.22	w.	13.1	4,400	
						3,750	644.7	− 4.8	.....	72	2.94	w.	14.7	.....	
						4,000	623.5	− 6.8	.....	77	2.65	w.	16.3	.....	
11:38	967.6	13.4	69	s.	4.0	4,120	614.1	− 7.8	0.82	79	2.49	w.	17.1	.....	
						4,000	624.4	− 6.8	.....	82	2.82	w.	15.1	.....	
11:46	967.4	13.6	68	s.	3.6	3,825	637.5	− 5.4	0.84	86	3.34	w.	12.1	.....	
						3,750	643.3	− 4.8	.....	84	3.43	w.	12.0	.....	
						3,500	663.2	− 2.7	.....	77	3.76	wsw.	11.9	.....	
						3,250	684.1	− 0.6	.....	70	4.07	wsw.	11.7	3,600	
						3,000	705.4	1.6	.....	63	4.32	wsw.	11.5	.....	
						2,750	728.0	3.7	.....	57	4.54	sw.	11.3	.....	
P. M.															
12:14	967.0	14.7	67	sse.	3.6	2,581	744.0	5.1	0.74	52	4.57	sw.	11.2	2,500	Solar halo, 22° radius, from about noon and continued.
						2,500	751.3	5.7	.....	51	4.67	sw.	11.2	.....	
						2,250	774.8	7.6	.....	47	4.91	sw.	11.0	.....	
						2,000	798.0	9.4	.....	44	5.19	sw.	10.9	.....	
						1,750	822.0	11.2	.....	40	5.32	ssw.	10.7	1,500	
						1,500	847.0	13.1	.....	37	5.58	ssw.	10.6	.....	
12:34	966.8	14.6	67	sse.	4.9	1,408	856.8	13.8	−0.63	36	5.66	ssw.	10.5	.....	
12:41	966.7	14.5	66	s.	4.0	1,250	872.8	12.8	.....	49	7.24	s.	14.9	950	
						1,169	881.5	12.3	−0.73	55	7.87	s.	17.2	.....	
12:51	966.6	14.6	64	sse.	4.9	1,000	899.0	11.3	.....	64	8.57	sse.	14.0	.....	
						826	918.1	9.8	1.16	74	8.97	sse.	10.6	380	
						750	926.3	10.7	.....	72	9.27	sse.	9.5	0	
						500	954.2	13.6	.....	66	10.28	s.	6.0	.....	7/10 Cl.St., w.
12:59	966.5	14.8	64	s.	4.5	396	966.5	14.8	.....	64	10.77	s.	4.5	.....	Few A. St., w.

November 2, 1918, series (No. 8).

P. M.															
1:40	966.3	15.4	61	sse.	4.9	396	966.3	15.4	.....	61	10.68	sse.	4.9	.....	7/10 Cl.St., w.; few A.St., w.
						500	954.5	13.9	.....	63	10.00	sse.	5.8	.....	
1:44	966.3	15.6	62	sse.	4.9	609	942.1	12.4	1.41	66	9.60	s.	6.5	.....	
						750	926.5	11.2	.....	71	9.58	s.	6.7	0	
1:56	966.2	15.7	64	sse.	5.8	933	906.2	9.7	0.83	77	9.26	sse.	7.0	.....	3/10 Cl.St., w.; 4/10 A.Cu., nw.
						1,000	899.0	10.6	.....	72	9.20	s.	9.2	.....	
2:05	966.2	15.4	64	sse.	4.5	1,204	877.5	13.2	−1.29	57	8.65	ssw.	16.2	.....	
						1,250	872.4	13.1	.....	56	8.44	ssw.	15.8	1,000	Solar halo ended about 2:00 p. m.
						1,500	846.8	12.3	.....	48	6.87	ssw.	13.4	.....	
						1,750	822.0	11.5	.....	41	5.56	ssw.	11.0	.....	
2:26	966.2	14.9	66	sse.	4.9	1,908	806.7	11.0	0.31	36	4.73	ssw.	9.5	1,700	3/10 Cl.St., w.; 6/10 A.Cu., nw.
						2,000	797.6	10.3	.....	36	4.51	ssw.	10.5	.....	
						2,250	773.9	8.3	.....	37	4.05	sw.	13.4	.....	
2:36	966.2	15.1	67	sse.	5.4	2,446	755.9	6.8	0.78	38	3.75	sw.	15.6	0	
						2,500	750.9	6.4	.....	39	3.75	sw.	15.4	3,000	
						2,750	728.5	4.3	.....	43	3.57	sw.	14.7	.....	
						3,000	706.4	2.2	.....	47	3.37	sw.	13.9	.....	
						3,250	684.5	0.2	.....	52	3.22	sw.	13.1	3,700	
3:03	966.2	15.2	65	s.	6.7	3,452	667.6	− 1.5	0.82	55	2.96	sw.	12.5	.....	
						3,500	663.4	− 1.9	.....	57	2.98	sw.	12.8	.....	
						3,750	642.7	− 3.9	.....	65	2.87	wsw.	14.1	4,000	4/10 Cl.St., w.; 5/10 A.Cu., nw.
						4,000	622.6	− 6.0	.....	73	2.69	wsw.	15.4	.....	
3:32	966.2	15.5	65	s.	4.9	4,198	607.5	− 7.6	0.82	80	2.57	w.	16.4	.....	
						4,250	603.4	− 8.0	.....	80	2.48	w.	17.4	.....	
						4,500	584.3	−10.0	.....	82	2.13	w.	21.6	.....	
						4,750	565.5	−12.1	.....	83	1.78	wnw.	26.0	7,500	
3:43	966.2	15.4	67	s.	4.9	4,879	555.7	−13.1	0.74	84	1.65	wnw.	28.2	.....	
						4,750	565.5	−12.3	.....	85	1.79	wnw.	26.0	.....	
						4,500	584.3	−10.6	.....	88	2.16	wnw.	21.6	.....	
						4,250	603.0	− 9.0	.....	91	2.58	w.	17.3	.....	
4:03	966.2	15.0	69	s.	4.9	4,013	621.3	− 7.4	0.96	93	3.03	w.	13.2	.....	
						4,000	622.0	− 7.3	.....	93	3.06	w.	13.2	.....	
						3,750	642.0	− 4.9	.....	84	3.40	w.	13.6	3,800	
						3,500	662.5	− 2.5	.....	75	3.72	w.	13.9	.....	
						3,250	683.7	− 0.1	.....	66	4.00	wsw.	14.3	.....	
						3,000	705.4	2.3	.....	57	4.11	wsw.	14.7	.....	
4:19	966.3	14.7	70	s.	4.9	2,837	720.1	3.9	0.67	51	4.12	wsw.	14.9	2,600	
						2,750	727.8	4.5	.....	50	4.21	wsw.	15.1	2,500	
						2,500	750.3	6.4	.....	49	4.62	wsw.	15.8	.....	
						2,250	773.3	7.8	.....	48	5.08	sw.	16.5	.....	
						2,000	796.8	9.5	.....	46	5.46	sw.	17.1	1,000	
						1,750	821.2	11.2	.....	44	5.85	sw.	17.8	.....	
4:41	966.4	14.2	72	ssw.	4.5	1,668	829.6	11.7	−1.22	44	6.08	sw.	18.0	.....	
						1,500	846.5	9.6	.....	64	7.65	sw.	14.9	.....	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 2, 1918, series (No. 8)—Continued.

Surface.						At different heights above sea.									
Time.	Pressure	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*Volts.*	
4:54	966.5	14.1	74	ssw.	3.6	1,333	864.0	7.6	0.76	81	8.67	sw.	11.8	900	
						1,250	872.4	8.2		82	8.91	sw.	11.5		
						1,000	899.0	10.1		77	9.52	ssw.	10.6		
						750	926.5	12.1		73	10.31	s.	9.7	0	
5:13	966.4	13.6	74	s.	3.6	587	944.7	13.3	−0.05	70	10.69	s.	9.1		
						500	954.5	13.3		73	11.15	s.	6.6		
5:18	966.3	13.2	77	s.	3.6	396	966.3	13.2		77	11.68	s.	3.6		10/10 A.Cu., wnw.
November 3, 1918.															
A. M.															
7:02	971.3	4.2	97	nw.	5.8	396	971.3	4.2		97	8.00	nw.	5.8		Cloudless.
						500	959.0	5.7		90	8.24	nw.	9.6		
7:05	971.4	4.2	97	nw.	6.3	654	941.3	7.8	−1.40	80	8.46	nnw.	15.3	0	
						750	930.3	7.5		80	8.30	nnw.	15.1		
						1,000	902.7	6.8		78	7.90	nnw.	14.5	330	
7:25	971.7	4.2	97	nw.	4.9	1,088	893.2	6.6	0.28	78	7.60	nnw.	14.3		Cloudless.
						1,250	875.8	7.2		64	6.50	nnw.	16.0		
						1,500	849.7	8.0		42	4.51	nw.	18.7	1,100	
7:40	972.0	4.7	94	nw.	5.4	1,666	833.0	8.6	−0.35	28	3.13	nw.	20.5		
						1,750	824.7	8.3		27	2.96	nw.	20.7		
						2,000	800.2	7.6		24	2.51	nw.	21.4	2,800	
						2,250	776.2	6.8		21	2.07	nw.	22.1		
						2,500	752.8	6.0		18	1.68	nw.	22.7	4,300	
7:59	972.3	5.0	94	nw.	4.5	2,594	744.3	5.7	0.31	17	1.56	nw.	23.0	4,300	
						2,750	730 0	4.6		18	1.53	nw.	24.0		
						3,000	708.2	2.8		20	1.49	nw.	25.7	5,400	
						3,250	686.9	1.0		22	1.45	nw.	27.4		
8:31	972.7	6.0	91	nw.	3.1	3,448	670.2	−0.4	0.71	23	1.36	nw.	28.7	7,200	Few St.Cu., nnw.
						3,250	686.9	1.0		22	1.45	nw.	28.5		
						3,000	708.2	2.8		22	1.64	nw.	28.2		
						2,750	730.7	4.6		21	1.78	nw.	27.9		
9:00	973.0	6.7	88	nnw.	4.0	2,716	733.8	4.8	0.41	21	1.81	nw.	27.9	4,200	
						2,500	753.5	5.7		20	1.83	nw.	25.1		
						2,250	776.9	6.7		18	1.77	nw.	22.0		
						2,000	801.0	7.8		16	1.69	nw.	18.8	2,300	
9:25	973.4	7.9	82	nnw.	2.7	1,798	820.9	8.6	−0.42	15	1.68	nw.	16.2		
						1,750	825.7	8.4		17	1.87	nw.	15.7		
						1,500	851.2	7.3		26	2.66	nnw.	13.2		
9:33	973.6	8.1	83	nnw.	4.5	1,255	877.1	6.3	0.50	35	3.34	nnw.	10.8		
						1,000	904.4	7.6		55	5.74	nnw.	8.7		
9:42	973.7	8.4	82	nnw.	4.5	777	929.7	8.7	−0.38	72	8.10	nnw.	6.9		
						750	932.4	7.7		80	8.41	nnw.	7.2		
9:46	973.8	8.6	81	nw.	4.0	697	938.7	5.7	1.00	91	8.34	nnw.	7.8	0	
						500	961.3	7.7		84	8.83	nw.	5.3		
9:51	973.8	8.7	81	nw.	4.0	396	973.8	8.7		81	9.11	nw.	4.0		Few St.Cu., nnw.
November 4, 1918.															
A. M.															
7:47	970.9	8.5	89	se.	7.6	396	970.9	8.5		89	9.88	se.	7.6		10/10 St.Cu., s.
						500	959.0	10.5		84	10.67	sse.	10.3		
7:55	970.9	8.7	89	se.	6.3	726	933.3	14.8	−1.91	73	12 29	s.	16.2	510	
						750	930.5	14.6		74	12.30	s.	16.3		
						1,000	902 8	12.0		81	11.36	s.	16.8	1,500	
						1,250	876.0	9.5		89	10.56	s.	17.4		
						1,500	850.4	7.0		96	9.62	s.	17.9		Altitude of St.Cu. base about 1,600
8:20	970.9	9.4	87	se.	8.0	1,645	835.8	5.8	1.00	100	9.22	s.	18.2	3,000	m.
						1,750	825.3	11.1		57	7.53	s.	19.5		
8:23	970.9	9.4	87	se.	8.9	1.779	822.4	12.6	−5.07	45	6.57	s.	19.8		
						2,000	801.0	11.6		36	4.92	ssw.	17.2		
8:35	970.9	9.5	86	se.	8.9	2.165	785.1	10.8	0.47	29	3.76	ssw.	15.2	5,000	
						2,250	777.4	10.1		29	3.58	ssw.	14.9	5,100	
						2,500	754.4	8.1		28	3.02	ssw.	14.0	5.300	
						2.750	732.0	6.1		28	2.64	ssw.	13.1	5,800	
						3.000	710.0	4.1		27	2.21	ssw.	12.2		10/10 St.Cu., s.
9:37	970.7	10.5	85	se.	8.5	3,142	697.3	3.0	0.84	27	2.05	ssw.	11.7		
						3,000	710.0	4.2		27	2.23	ssw.	12.1		
						2.750	732.0	6.4		26	2.50	ssw.	12.7		
						2,500	754.4	8.6		25	2.79	ssw.	13.4	4,000	
						2.250	777.4	10.8		24	3.10	ssw.	14.0		
9:58	970.6	10.7	85	se.	10.3	2 140	787.5	11.8	0.30	24	3.32	ssw.	14.3		
						2,000	801.0	12.2		24	3.41	ssw.	18.3	4,100	
10:16	970.5	11.0	86	sse.	8.9	1.803	820 0	12.8	−5.56	23	3.40	s.	23.9		Altitude of St.Cu. base about 1,500
						1,750	825.3	9.9		60	7.32	s.	22.9	3,200	m.
10:23	970.5	11.1	86	sse.	8.0	1,695	830 9	6.8	0.82	98	9.68	s.	21.7		
						1.500	850.9	8.4		92	10.14	s.	21.6		
						1,250	876.7	10.5		83	10.54	s.	21.6		10/10 St.Cu., s.
10:39	970.4	11.6	85	se.	8.5	1,088	893 8	11.8	1.03	78	10.80	s.	21.5	1,700	
						1,000	902.8	12 7		76	11.16	s.	20.8		
						750	930.0	15 3		70	12.17	s.	18.5		
10:52	970.3	12.1	85	sse.	8.0	698	935.9	15.8	−2.97	69	12 39	s.	18.5	0	
10:56	970 3	12.4	84	sse.	8.9	513	956.7	10.3	1.97	84	10 53	sse.	20.1		
						500	958.3	10.6		84	10.74	sse.	18.9		
10:58	970.3	12.6	83	sse.	8.9	396	970.3	12.6		83	12.11	sse.	8.9		8/10 St.Cu., s.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 5, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:59	963.5	14.5	86	s.	10.7	396	963.5	14.5	.....	86	14.20	s.	10.7	.....	7/10 St.Cu., ssw.
						500	951.0	13.8	.....	89	14.04	s.	14.1	.....	
8:03	963.5	14.8	84	s.	9.8	700	929.4	12.5	0.66	94	13.62	ssw.	20.5	260	
						750	923.7	12.2	.....	94	13.36	ssw.	20.1	.....	
						1,000	896.9	10.8	.....	95	12.30	ssw.	18.0	2,000	Altitude of St.Cu. base about 1,050 m.
						1,250	870.6	9.4	.....	96	11.32	ssw.	16.0	5,600	
						1,500	844.3	7.9	.....	98	10.44	ssw.	13.9	.....	
8:23	963.6	14.7	83	s.	8.9	1,595	834.5	7.4	0.40	98	10.00	ssw.	13.1	.....	
						1,500	844.3	7.6	.....	97	10.13	ssw.	13.2	.....	
						1,250	870.6	8.2	.....	96	10.44	ssw.	13.6	4,500	10/10 St.Cu., ssw.
						1,000	896.9	8.8	.....	95	10.76	ssw.	14.0	3,000	
						750	923.7	9.4	.....	93	10.96	ssw.	14.3	.....	
8:44	963.7	14.7	84	s.	8.5	*700	929.4	9.5	.....	93	11.04	ssw.	14.4	.....	10/10 St., ssw., with light rain at end of flight.

November 6, 1918.

P. M.															
3:50	965.5	9.0	100	n.	5.8	396	965.5	9.0	.....	100	11.48	n.	4.5	.....	Light rain from 3:24 to 3:35 p. m.
						500	953.5	7.8	.....	100	10.58	nnw.	5.5	.....	10/10 St., nnw.
3:56	965.5	8.9	98	n.	4.5	517	951.5	7.6	1.16	100	10.44	nnw.	5.7	0	Light fog began 4:10 p. m. and continued at end of flight.
4:57	966.8	7.1	100	nnw.	7.2	744	926.8	11.0	−1.50	100	13.13	nw.	2.8	620	
						750	925.8	10.9	.....	100	13.04	nw.	2.9	.....	
5:05	966.9	6.9	100	nnw.	4.5	837	916.5	9.7	−3.46	100	12.03	nw.	3.7	.....	Altitude of St. base about 500 m.
5:18	967.0	6.3	100	nnw.	4.5	778	922.9	4.8	0.39	98	8.43	nw.	6.0	.....	
						750	925.8	4.9	.....	98	8.49	nw.	5.9	260	
						500	954.4	5.9	.....	99	9.20	nnw.	4.9	.....	
5:29	967.0	6.3	100	nnw.	4.5	396	967.0	6.3	.....	100	9.55	nnw.	4.5	.....	10/10 St., nnw.

November 8, 1918 (No. 1).

A. M.															
7:10	965.3	1.0	96	sw.	4.9	396	965.3	1.0	.....	96	6.31	sw.	4.9	.....	Cloudless.
						500	953.0	1.6	.....	86	5.90	wsw.	6.2	.....	
						750	924.0	3.1	.....	61	4.65	w.	9.2	.....	
7:20	965.4	1.0	96	sw.	5.8	766	922.1	3.2	−0.59	59	4.54	w.	9.4	0	
						1,000	895.8	3.1	.....	52	3.97	w.	13.3	.....	
						1,250	868.8	3.0	.....	46	3.49	w.	17.5	460	
7:37	965.6	1.2	96	sw.	4.5	1,306	863.0	3.0	0.04	44	3.34	w.	18.4	.....	
						1,500	842.0	1.3	.....	47	3.15	w.	19.0	.....	
						1,750	816.5	−0.8	.....	51	2.91	w.	19.8	1,100	
8:04	965.9	1.8	93	sw.	4.9	1,976	793.6	−2.8	0.58	55	2.66	w.	20.5	.....	
						1,750	816.5	−1.8	.....	58	3.05	w.	17.1	1,170	
						1,500	843.0	−0.6	.....	62	3.60	w.	13.4	890	
9:03	966.5	3.6	86	wsw.	6.7	1,314	863.0	0.2	0.87	65	4.03	w.	10.7	.....	
						1,250	869.8	0.8	.....	61	3.95	w.	10.6	.....	
						1,000	896.9	2.9	.....	46	3.46	w.	10.3	.....	
9:14	966.4	3.9	83	w.	4.9	970	900.3	3.2	0.38	44	3.38	w.	10.3	.....	
						750	925.0	4.0	.....	55	4.47	w.	7.2	.....	
9:23	966.4	4.1	83	w.	4.5	709	929.8	4.2	−0.24	57	4.70	w.	6.6	.....	
9:25	966.4	4.2	82	w.	4.5	618	940.2	2.0	0.99	70	4.94	w.	6.6	.....	
						500	954.0	3.2	.....	76	5.85	w.	5.5	.....	
9:26	966.4	4.2	82	w.	4.5	396	966.4	4.2	.....	82	6.76	w.	4.5	.....	Cloudless.

November 8, 1918 (No. 2).

P. M.															
12:26	965.4	9.0	74	w.	5.8	396	965.4	9.0	.....	74	8.50	w.	5.8	.....	Few Cu., wsw.
						500	953.3	8.9	.....	71	8.09	w.	5.9	.....	
12:35	965.3	9.0	74	w.	6.7	607	941.0	7.0	0.95	67	6.71	w.	7.3	.....	
						750	924.7	5.6	.....	69	6.28	w.	9.0	0	
12:52	965.2	9.4	77	w.	8.0	926	904.9	4.0	0.94	72	5.85	wsw.	11.2	.....	2/10 Cu., wsw.
						1,000	896.4	3.3	.....	75	5.80	wsw.	11.9	.....	
						1,250	869.0	0.8	.....	84	5.43	wsw.	14.3	.....	
						1,500	842.9	−1.7	.....	94	4.98	wsw.	16.7	.....	
1:09	965.2	9.3	81	w.	8.5	1,627	829.3	−3.0	1.00	99	4.70	wsw.	17.9	.....	
						1,750	817.0	−3.0	.....	92	4.37	wsw.	18.3	2,000	
						2,000	791.6	−4.3	.....	76	3.24	wsw.	19.1	2,000	
1:22	965.2	9.5	85	w.	8.0	2,221	769.2	−5.0	0.17	63	2.53	wsw.	19.8	2,000	
						2,000	791.0	−5.0	.....	97	3.89	w.	12.7	.....	
1:31	965.2	9.1	86	w.	8.9	1,967	794.2	−5.0	0.64	100	4.01	w.	23.1	.....	
						1,750	817.0	−3.6	.....	100	4.52	w.	20.1	1,170	Altitude of St.Cu. base about 1,600 m.
						1,500	842.9	−2.0	.....	100	5.17	w.	13.1	.....	
1:47	965.2	8.8	72	wnw.	6.7	1,370	856.3	−1.2	1.01	100	5.53	w.	14.9	.....	
						1,250	869.0	0.0	.....	94	5.74	w.	14.4	500	6/10 St.Cu., w.
						1,000	896.4	2.5	.....	83	6.07	w.	13.3	.....	
2:04	965.2	8.8	78	wnw.	9.8	754	924.1	5.0	1.06	71	6.19	w.	12.3	0	
						500	953.3	7.7	.....	78	8.20	wnw.	9.6	.....	
2:12	965.3	8.8	81	wnw.	8.5	396	965.3	8.8	.....	81	9.18	wnw.	8.5	.....	8/10 St.Cu., w.

* Kite collapsed in air.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 9, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*Volts.*	
7:32	973.0	1.4	86	nw.	7.2	396	973.0	1.4		86	5.81	nw.	7.2		Cloudless.
						500	960.5	0.6		85	5.42	nw.	10.4		
7:39	973.1	1.4	86	nw.	6.3	723	934.3	−1.2	0.80	83	4.59	nw.	17.2	0	
						750	931.1	−1.2		82	4.53	nw.	17.1		
						1,000	902.3	−1.2		72	3.98	nnw.	16.3		
7:52	973.2	1.8	77	nw.	5.8	1,245	875.3	−1.2	0.00	62	3.43	nnw.	15.5	1,500	
						1,500	847.9	−0.5		50	2.93	nnw.	16.4		
						1,750	821.8	0.1		39	2.40	nnw.	17.3		Cloudless.
8:00	973.4	2.0	74	nw.	8.0	1,860	810.6	0.4	−0.26	34	2.14	nnw.	17.7	2,600	
						2,000	796.6	−0.8		32	1.83	nnw.	16.6		
8:15	973.5	2.1	73	nw.	7.6	2,135	783.2	−2.0	0.87	31	1.60	nnw.	15.6	4,000	
						2,250	772.0	−1.8		20	1.53	nnw.	16.0		
						2,500	748.4	−1.5		24	1.83	nnw.	16.9	4,400	
8:49	974.1	2.7	72	nw.	8.0	2,567	742.4	−1.4	−0.14	23	1.25	nnw.	17.1	5,000	
						2,750	725.2	−2.1		22	1.13	nnw.	17.5		
						3,000	703.0	−3.2		19	0.89	nnw.	18.1		
						3,250	681.6	−4.2		17	0.73	nnw.	18.7	7,000	
9:22	974.6	2.7	71	nw.	7.2	3,301	677.1	−4.4	0.38	17	0.72	nnw.	18.8		
						3,250	681.6	−4.2		17	0.73	nnw.	18.6		
						3,000	703.8	−3.4		17	0.78	nnw.	17.6		
						2,750	726.4	−2.6		16	0.79	nnw.	16.6		
						2,500	749.6	−1.7		16	0.85	nnw.	15.5		Few St.Cu., nnw.
9:45	974.8	3.3	68	nw.	7.6	2,417	757.5	−1.4	0.28	16	0.87	nnw.	15.2	3,300	
						2,250	773.5	−0.9		18	1.02	nnw.	15.2	3,300	
						2,000	798.0	−0.2		20	1.20	nnw.	15.1		
						1,750	823.6	0.5		23	1.46	nnw.	15.0		
10:20	975.1	3.8	68	nw.	5.8	1,526	847.0	1.1	−0.50	25	1.66	nnw.	15.0	2,200	
						1,500	849.6	1.0		26	1.71	nnw.	15.0		
						1,250	876.5	−0.3		40	2.38	nnw.	15.1		
10:38	975.2	4.0	67	nw.	8.5	1,025	901.8	−1.4	0.53	52	2.83	nnw.	15.2	1,200	
						1,000	904.3	−1.3		54	2.96	nnw.	14.9		
						750	933.3	0.0		76	4.64	nw.	11.5		
10:48	975.2	4.4	67	nw.	7.2	664	943.4	0.5	1.46	83	5.25	nw.	10.4	0	
						500	963.0	2.9		72	5.42	nw.	8.1		
10:54	975.3	4.4	66	nw.	6.7	396	975.3	4.4		66	5.52	nw.	6.7		Few St.Cu., nnw.

November 10, 1918.

A. M.															
7:15	978.5	−1.2	92	sse.	4.5	396	978.5	− 1.2		92	5.09	sse.	4.5		1/10 Cl.Cu., w.
						500	965.5	3.0		73	5.53	sse.	10.9		
7:17	978.5	−1.2	92	sse.	4.5	542	961.0	4.7	−4.04	66	5.64	sse.	11.1		
						750	936.8	5.2		55	4.87	s.	9.6	0	
						1,000	908.7	5.9		41	3.81	ssw.	7.9		
7:36	978.6	−0.9	92	sse.	3.6	1,098	897.9	6.1	−0.25	36	3.39	ssw.	7.2	755	
7:56	978.7	−0.4	90	sse.	3.6	1,225	884.2	6.0	0.08	30	2.80	ssw.	7.4	1,000	
						1,250	881.0	5.9		30	2.79	ssw.	7.5		
						1,500	854.5	4.7		33	2.82	sw.	8.4		
						1,750	828.8	3.5		35	2.75	sw.	9.3		
						2,000	803.8	2.4		37	2.69	wsw.	10.1	2,800	
8:04	978.7	0.0	90	sse.	3.6	2,187	785.5	1.5	0.47	39	2.66	wsw.	10.8	3,300	
						2,250	779.3	1.1		40	2.65	wsw.	11.0		
						2,500	755.3	− 0.7		43	2.48	wsw.	12.0	4,300	
						2,750	731.3	− 2.5		46	2.28	wsw.	12.9		
8:34	978.5	0.8	92	sse.	4.9	2,963	712.4	− 4.0	0.71	49	2.14	wsw.	13.7		1/10 Ci.St., w.
						3,000	709.0	− 4.1		48	2.08	wsw.	13.5		
						3,250	687.0	− 4.4		39	1.65	wsw.	12.5	5,700	3/10 Ci., w.; 1/10 Ci.St., w.
						3,500	665.3	− 4.8		30	1.22	wsw.	11.5	6,000	
9:26	978.4	2.8	84	sse.	3.6	3,697	649.2	− 5.1	0.15	23	0.92	wsw.	10.7	6,600	
						3,750	644.8	− 5.5		23	0.88	wsw.	10.9		
						4,000	625.0	− 7.5		23	0.74	wsw.	11.9		
						4,250	605.1	− 9.5		22	0.60	wsw.	12.9		
9:37	978.4	− 3.5	82	sse.	4.0	4,338	598.3	−10.2	0.82	22	0.56	wsw.	13.2		
						4,250	605.1	− 9.5		22	0.60	wsw.	12.8		
						4,000	625.0	− 7.4		22	0.72	wsw.	11.8	6,000	
						3,750	645.4	− 5.3		21	0.82	wsw.	10.7		
						3,500	666.2	− 3.3		21	0.98	wsw.	9.6		
9:54	978.4	4.9	79	sse.	4.5	3,430	672.3	− 2.7	−0.36	21	1.02	wsw.	9.3		2/10 Ci.St., w.; 5/10 A.Cu., w.
						3,250	688.0	− 3.4		24	1.10	wsw.	10.0		
10:04	978.4	5.0	77	sse.	4.5	3,011	709.0	− 4.2	0.88	28	1.20	wsw.	10.8	3,800	
						3,000	710.0	− 4.1		28	1.21	wsw.	10.8		
						2,750	734.1	− 1.9		31	1.63	wsw.	11.1		
						2,500	755.3	0.3		35	2.18	wsw.	11.4		
10:19	978.3	5.2	75	sse.	6.3	2,421	763.3	1.0	0.60	36	2.37	wsw.	11.5	3,000	
						2,250	779.3	2.0		37	2.61	wsw.	11.8		Partial solar halo, 22° radius, from 10:30 to 11:00 a. m.
						2,000	803.8	3.5		38	2.98	sw.	12.3		
10:34	978.2	5.4	72	s.	6.3	1,776	826.4	4.9	0.51	39	3.38	sw.	12.7	2,200	
						1,750	828.8	5.0		39	3.40	sw.	12.8		
						1,500	854.5	6.3		40	3.82	sw.	13.2		
						1,250	881.0	7.6		41	4.28	ssw.	13.7		
10:48	978.1	6.6	71	s.	6.3	1,211	885.4	7.8	−0.75	41	4.34	ssw.	13.8	1,300	
						1,000	908.7	6.2		41	3.89	ssw.	13.7		
						750	936.8	4.4		41	3.43	s.	13.6	460	
11:01	978.0	6.8	67	ssw.	8.0	662	946.6	3.7	1.32	41	3.26	s.	13.6		
						500	965.8	5.8		54	4.98	s.	8.8		
11:09	977.9	7.2	62	s.	5.8	396	977.9	7.2		62	6.30	s.	5.8		3/10 Ci., w.; 3/10 Ci.St., w.; 2/10 A.St., w.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 11, 1918, series (No. 1).

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*Volts.*	
7:16	972.1	3.8	94	s.	4.5	396	972.1	3.8		94	7.53	s.	4.5		Few Ci.St., w.
						500	960.0	5.5		82	7.40	s.	5.6		
						750	931.5	9.6		54	6.45	ssw.	8.3	0	
7:24	972.1	3.8	94	s.	4.5	763	929.7	9.8	−1.64	53	6.42	ssw.	8.4		
7:28	972.1	3.8	92	s.	4.5	890	915.6	13.2	−2.68	44	6.67	ssw.	9.4		
						1,000	904.0	12.6		42	6.13	ssw.	10.0	1,100	
						1,250	877.7	11.2		38	5.05	ssw.	11.5		
						1,500	851.8	9.8		33	4.00	sw.	12.9		
7:50	972.2	4.4	91	s.	4.5	1,744	826.5	8.4	0.56	29	3.20	sw.	14.3	1,800	
						1,750	826.1	8.4		29	3.20	sw.	14.3		
						2,000	801.3	7.0		28	2.81	sw.	13.9		
8:04	972.3	4.6	90	s.	4.9	2,148	786.8	6.2	0.64	27	2.56	sw.	13.6	2,200	
						2,250	777.0	5.7		26	2.38	sw.	13.6		2/10 Ci.St., w.
						2,500	753.4	4.5		22	1.85	sw.	13.6		
						2,750	730.5	3.3		19	1.47	wsw.	13.7	3,100	
						3,000	708.7	2.1		15	1.07	wsw.	13.7	4,100	
8:53	972.3	6.1	87	s.	5.4	3,018	707.0	2.0	0.48	15	1.06	wsw.	13.7	4,000	
						3,250	687.0	0.3		23	1.44	wsw.	13.9		
9:20	972.3	7.8	82	ssw.	8.0	3,429	672.6	−1.1	0.76	29	1.62	wsw.	14.1		
						3,250	687.0	0.3		29	1.81	wsw.	12.7		
						3,000	708.9	2.1		29	2.06	wsw.	10.9	4,000	
						2,750	731.9	4.0		29	2.36	wsw.	9.0	2,700	
9:34	972.3	8.2	79	ssw.	8.9	2,638	742.5	4.9	0.70	29	2.51	wsw.	8.1		2/10 Ci.St., w.
						2,500	755.3	5.9		28	2.60	wsw.	8.6		
						2,250	779.0	7.6		26	2.71	sw.	9.4	2,400	
						2,000	802.9	9.4		24	2.83	sw.	10.3		
						1,750	827.1	11.1		23	3.04	ssw.	11.2	1,300	
10:09	972.3	9.1	76	ssw.	8.9	1,512	851.0	12.8	0.49	21	3.10	ssw.	12.0		
						1,500	852.1	12.9		21	3.12	ssw.	12.1		
						1,250	877.7	14.1		23	3.70	ssw.	15.1		
						1,000	904.0	15.3		24	4.17	ssw.	18.1	890	
10:24	972.2	9.6	76	ssw.	8.5	894	915.6	15.8	−4.52	25	4.49	ssw.	19.4		
						750	931.5	9.3		50	5.86	ssw.	14.2	0	
10:34	972.1	9.8	75	ssw.	8.5	697	937.4	6.9	1.00	59	5.87	ssw.	12.3		
						500	960.0	8.9		69	7.87	ssw.	11.0		
10:39	972.1	9.9	74	ssw.	10.3	396	972.1	9.9		74	9.03	ssw.	10.3		1/10 Ci.St., w.

November 11, 1918, series (No. 2).

A. M.															
11:14	971.8	11.6	72	ssw.	8.0	396	971.8	11.6		72	9.84	ssw.	8.0		Few Ci., w.
						500	959.6	10.0		74	9.09	ssw.	10.6		
						750	931.0	6.1		79	7.44	s.	16.7		
11:24	971.7	11.7	71	ssw.	10.3	766	929.3	5.9	1.56	79	7.34	s.	17.1	680	
						1,000	903.2	12.6		43	6.27	ssw.	18.4		
11:28	871.7	12.2	68	ssw.	9.4	1,032	900.0	13.5	−2.86	38	5.88	ssw.	18.6		
						1,250	876.5	12.6		33	4.81	ssw.	16.1	1,500	
						1,500	850.9	11.6		27	3.69	ssw.	13.2	2,200	
11:48	971.4	13.6	58	ssw.	8.9	1,687	832.1	10.8	0.41	23	2.98	ssw.	11.0	2,200	
						1,750	825.8	10.4		22	2.77	ssw.	11.3		
						2,000	801.0	8.9		20	2.28	sw.	12.4		
P. M.															
12:05	971.2	13.0	65	ssw.	9.8	2,252	776.9	7.4	0.60	18	1.85	sw.	13.5	3,000	Few Ci., w.
						2,500	753.5	5.4		21	1.89	sw.	12.3	3,200	
						2,750	730.8	3.4		23	1.79	wsw.	11.1		
12:36	970.7	14.0	62	ssw.	8.9	2,824	724.4	2.8	0.80	24	1.79	wsw.	10.7	3,500	
						3,000	708.9	1.6		25	1.72	wsw.	11.7		
						3,250	687.2	− 0.2		26	1.56	wsw.	13.1		
						3,500	666.5	− 2.0		28	1.45	w.	14.5	4,900	Cloudless.
						3,750	645.5	− 3.7		29	1.30	w.	15.9		
12:56	970.4	14.4	61	ssw.	8.5	3,775	643.4	− 3.9	0.78	29	1.28	w.	16.0		
						3,750	645.5	− 3.7		29	1.30	w.	16.0		
1:11	970.1	14.4	64	ssw.	11.6	3,500	666.3	− 1.5	0.79	32	1.72	w.	16.0		
						3,250	687.8	0.5		31	1.96	w.	14.5	4,700	
						3,000	709.5	2.5		30	2.19	wsw.	13.0		
						2,750	731.5	4.5		29	2.44	sw.	11.5		
1:34	969.7	14.9	63	ssw.	11.6	2,542	750.0	6.1	0.68	28	2.64	sw.	10.2		Few Ci.St., w.
						2,500	753.9	6.4		27	2.59	sw.	10.5		
						2,250	777.1	8.1		24	2.59	sw.	12.5	3,200	
						2,000	800.8	9.8		21	2.55	sw.	14.4	2,200	
2:03	969.2	15.8	57	ssw.	13.4	1,801	819.9	11.1	0.49	19	2.51	sw.	16.0		
						1,750	824.6	11.3		19	2.54	sw.	16.6		
						1,500	849.7	12.6		20	2.92	ssw.	19.8		
						1,250	875.3	13.8		21	3.31	ssw.	22.9	1,100	
2:09	969.2	16.0	56	ssw.	12.1	1,207	880.1	14.0	−3.78	21	3.36	ssw.	23.4		
2:23	969.1	16.3	57	ssw.	13.4	1,088	892.5	9.5	1.13	32	3.80	ssw.	23.4		
						1,000	902.0	10.5		39	4.95	ssw.	23.0	420	
						750	929.7	13.3		58	8.86	ssw.	11.9		
2:45	969.0	16.4	58	ssw.	10.7	715	933.2	13.7	0.78	61	9.56	ssw.	11.7	0	
						500	957.2	15.4		60	10.50	ssw.	10.4		
2:52	968.9	16.2	59	ssw.	9.8	396	968.9	16.2		59	10.87	ssw.	9.8		1/10 Ci.St., w.

November 11, 1918, series (No. 3).

P. M.															
3:31	968.9	16.5	55	ssw.	10.7	396	968.9	16.5		55	10.32	ssw.	10.7		1/10 Ci.St., w.
						500	957.0	15.8		55	9.87	ssw.	12.5		
						750	929.4	14.0		56	8.95	ssw.	16.7		
3:39	968.9	16.5	56	ssw.	11.6	800	923.7	12.9	0.71	57	8.48	ssw.	19.2	0	
						1,000	902.0	13.0		53	7.94	ssw.	15.5		

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 11, 1918, series (No. 3)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
3:48	968.9	16.6	55	ssw.	11.2	1,153	885.7	13.0	−0.28	50	7.49	ssw.	25.7	1,040	
						1,250	875.5	12.8		47	6.95	ssw.	24.5		2/10 Cl.St., w.
						1,500	850.0	12.4		38	5.47	sw.	19.3	1,700	
						1,750	825.0	12.0		29	4.06	sw.	14.6		
4:12	969.0	16.5	55	ssw.	10.7	1,845	815.6	11.7	0.16	22	3.02	wsw.	11.0		
						2,000	800.6	10.4		22	2.77	wsw.	11.4	1,600	
						2,250	776.6	8.3		23	2.52	wsw.	12.0		
						2,500	753.3	6.2		24	2.28	w.	12.6	1,900	
						2,750	730.5	4.1		24	1.97	w.	13.2	2,500	1/10 Cl.St., w.; 1/10 A.St., w.
4:50	969.1	15.2	64	sw.	6.7	2,971	710.9	2.3	−0.84	25	1.80	w.	13.7	2,500	
						2,750	730.5	4.2		24	1.98	w.	13.8		
						2,500	752.8	6.3		23	2.20	wsw.	14.0	2,000	
						2,250	776.0	8.4		22	2.42	wsw.	14.1		
5:20	969.4	14.4	63	sw.	6.7	2,141	786.7	9.3	0.47	21	2.46	wsw.	14.2	1,700	
						2,000	800.4	9.9		21	2.56	wsw.	14.7		
						1,750	825.0	11.1		21	2.77	wsw.	15.5		
5:35	969.6	13.7	67	sw.	5.8	1,648	835.1	11.6	−0.65	21	2.87	wsw.	15.8		
						1,500	850.1	10.7		28	3.60	wsw.	17.1	1,100	
5:45	969.7	13.6	66	sw.	5.8	1,324	868.3	9.5	0.74	36	4.27	sw.	18.6		
						1,250	876.2	10.0		42	5.16	sw.	18.7		
5:55	969.8	13.6	65	sw.	5.8	1,053	896.9	11.5	0.88	59	8.01	sw.	19.0	540	
						1,000	902.6	12.0		59	8.28	sw.	19.0		
						750	930.0	14.2		60	9.71	ssw.	19.1		
6:07	969.9	13.2	69	sw.	8.0	725	932.8	14.4	−0.30	60	9.84	ssw.	19.1	0	
						500	958.0	13.7		66	10.35	sw.	10.0		
6:14	970.0	13.4	69	sw.	5.8	396	970.0	13.4		69	10.61	sw.	5.8		2/10 Cl.St., w.; 2/10 A.St., w.; very dim lunar halo began 6:25 p. m.

November 11, 1918, series (No. 4).

P. M.															
6:50	970.2	12.5	74	ssw.	3.1	396	970.2	12.5		74	10.72	ssw.	3.1		Lunar halo, 22° radius, began 6:25 p. m. and continued at end of flight.
						500	958.3	12.7		69	10.14	ssw.	5.8		
6:58	970.3	12.5	72	ssw.	3.1	703	935.5	13.2	−0.23	60	9.10	sw.	11.1		2/10 Cl.St., w.; 2/10 A.St., w.
						750	930.7	12.8		61	9.02	sw.	11.5		
						1,000	903.2	10.6		66	8.43	wsw.	13.5		
						1,250	876.3	8.5		68	7.55	wsw.	15.6	520	
7:20	970.6	11.6	77	ssw.	3.1	1,286	872.4	8.2	0.86	69	7.50	wsw.	15.9		
						1,500	850.2	8.0		55	5.90	wsw.	16.4		
7:29	970.8	11.6	75	sw.	2.7	1,546	845.4	8.0	0.08	52	5.58	wsw.	16.5	920	
						1,750	825.0	5.6		55	5.00	wsw.	12.7		3/10 Cl.St., w.; 3/10 A.St., w.
8:31	971.5	10.9	78	wsw.	2.2	2,000	800.5	2.7	1.17	58	4.30	w.	8.1	1,700	
						2,250	776.3	3.3		47	3.64	wnw.	9.7	1,700	
8:43	971.5	11.0	79	wsw.	2.7	2,317	769.7	3.4	−0.22	44	3.43	wnw.	10.1	2,400	
						2,500	752.2	2.4		43	3.12	wnw.	11.3		
						2,750	729.0	1.1		42	2.78	wnw.	12.9		
						3,000	707.0	− 0.3		41	2.44	wnw.	14.5	1,600	
						3,250	685.6	− 1.6		40	2.14	wnw.	16.1		
						3,500	664.5	− 2.9		39	1.87	wnw.	17.7		
8:54	971.6	10.6	80	wsw.	2.2	3,623	654.2	− 3.6	0.50	38	1.72	wnw.	18.5		
						3,500	664.5	− 3.0		38	1.80	wnw.	17.8		
						3,250	686.0	− 1.9		38	1.98	wnw.	17.5		
						3,000	707.8	− 0.7		39	2.25	wnw.	15.1		
						2,750	730.0	0.4		39	2.45	wnw.	13.8		
9:10	971.8	10.7	79	wsw.	2.2	2,608	742.9	2.1	0.62	39	2.77	wnw.	13.0		
						2,500	753.0	2.8		40	2.99	wnw.	13.0		
						2,250	776.3	4.3		41	3.41	nw.	13.0		
						2,000	800.7	5.9		42	3.90	nnw.	12.9	980	
9:29	972.1	10.0	81	wnw.	1.8	1,980	802.9	6.0	0.40	42	3.93	nnw.	12.9		
						1,750	825.5	6.9		47	4.68	nnw.	10.5		
						1,500	851.0	7.9		53	5.64	nnw.	7.9		
9:38	972.2	10.0	82	w.	3.1	1,285	873.7	8.8	0.37	58	6.57	nnw.	5.7		
						1,250	877.3	8.9		57	6.50	nnw.	5.9		
						1,000	904.1	9.8		53	6.42	nnw.	7.4		
9:50	972.4	9.8	82	nw.	3.1	879	917.5	10.3	−0.21	51	6.39	nnw.	8.1		
						750	931.8	10.0		60	7.37	nw.	6.7		
						500	960.2	9.5		78	9.26	wnw.	3.9		
10:03	972.6	9.3	85	wnw.	2.7	396	972.6	9.3		85	9.96	wnw.	2.7		3/10 Cl.St., w.; 6/10 A.St., w.

November 11–12, 1918, series (No. 5).

P. M.															
10:41	973.3	8.5	76	nnw.	4.0	396	973.3	8.5		76	8.43	nnw.	4.0		Lunar halo, 22° radius, continued from previous flight, ended at 10:41 p. m.
						500	961.3	9.4		65	7.66	n.	9.1		3/10 A.St., w.
10:52	973.5	8.2	72	n.	3.1	708	937.6	11.2	−0.87	44	5.85	nne.	19.2		
						750	932.9	11.0		44	5.78	nne.	18.9		
						1,000	905.1	9.6		44	5.26	nne.	17.4		
						1,250	878.4	8.8		44	5.01	n.	16.5		
						1,500	852.4	7.0		44	4.41	n.	14.4		
11:09	973.7	8.0	70	n.	3.1	1,588	843.1	6.5	0.53	44	4.26	n.	13.9		
						1,750	826.7	5.5		46	4.15	n.	13.3	0	
						2,000	801.6	4.0		50	4.06	n.	12.5		
11:29	973.9	7.6	68	n.	2.7	2,237	778.6	2.6	0.60	53	3.91	n.	11.7	1,010	
						2,250	777.3	2.5		53	3.87	n.	11.7		
						2,500	753.7	1.1		51	3.38	n.	11.4	1,700	
						2,750	730.8	− 0.3		48	2.86	nnw.	11.2		
						3,000	708.3	− 1.7		46	2.44	nnw.	10.9		1/10 Cl.St., w.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 11-12, 1918, series (No. 5)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
12:21	974.7	6.6	70	n.	2.7	3,011	707.4	− 1.8	0.60	46	2.42	nnw.	10.9		
						3,000	708.3	− 1.7		46	2.44	nnw.	10.9		
						2,750	730.8	− 0.2		47	2.82	nnw.	11.0		
						2,500	753.8	1.4		48	3.24	nnw.	11.1		
12:36	974.9	6.6	69	nnw.	2.7	2,314	771.6	2.5	0.43	49	3.58	nnw.	11.2	1,400	
						2,250	778.1	2.8		50	3.74	nnw.	10.9		
						2,000	802.3	3.8		52	4.17	n.	9.8		
						1,750	827.3	4.9		54	4.68	n.	8.6		
12:56	975.2	6.9	65	n.	3.1	1,715	830.9	5.5	0.55	55	4.97	n.	9.0	380	
						1,500	853.3	6.7		50	4.90	n.	10.1		
						1,250	879.7	8.0		44	4.72	n.	11.5	260	
1:13	975.6	6.6	69	n.	3.1	1,040	902.2	9.2	−0.69	39	4.54	n.	12.6		
						1,000	906.9	8.9		41	4.67	n.	12.7		
						750	935.0	7.2		54	5.49	nne.	13.2		
1:24	975.9	5.8	73	n.	2.7	634	947.9	6.6	−0.30	58	5.66	nne.	13.4	0	
						500	963.8	6.2		65	6.16	n.	7.4		
1:29	976.0	5.8	71	n.	2.7	396	976.0	5.8		71	6.55	n.	2.7		Cloudless.

November 12, 1918, series (No. 6).

A. M.															
2:17	976.8	4.6	80	n.	4.0	396	976.8	4.6		80	6.78	n.	4.0		Cloudless.
						500	964.4	7.5		63	6.53	n.	14.1		Dim aurora began 1:30 a. m., streamers observed from 2:15 a. m. to 3:33 a. m. subtending an angle of approximately 8° and visible from nnw. to nne.; aurora ended 4:25 a. m.
2:20	976.8	4.6	78	n.	4.0	533	960.6	8.4	−2.78	58	6.39	n.	17.3		
						750	935.5	8.2		50	5.44	n.	16.4	0	
						1,000	907.4	8.0		41	4.40	nnw.	15.3		
						1,250	880.7	7.7		31	3.26	nnw.	14.3	380	
2:47	976.9	4.0	79	nnw.	3.6	1,363	868.6	7.6	0.10	27	2.82	nnw.	13.8		
						1,500	854.0	6.3		26	2.48	nnw.	14.5		
2:55	977.0	3.4	80	nnw.	5.4	1,668	836.7	4.8	0.92	25	2.15	nnw.	15.2	860	
						1,750	828.0	4.3		28	2.33	nnw.	14.9		
						2,000	803.0	2.9		39	2.94	nnw.	13.8		
3:13	977.1	3.8	77	nnw.	3.6	2,148	788.8	2.1	0.56	45	3.20	nnw.	13.2	1,500	
						2,250	778.8	1.4		46	3.11	nnw.	13.3		
						2,500	755.0	0.4		49	3.08	nnw.	13.6	2,500	
						2,750	731.7	−2.2		52	2.65	nnw.	14.0	3,800	Cloudless.
						3,000	708.9	−4.0		55	2.40	nnw.	14.3		
3:58	977.4	4.1	75	nnw.	3.6	3,109	699.3	−4.8	0.72	56	2.28	nnw.	14.4		
						3,000	708.9	−4.0		56	2.45	nnw.	14.7		
						2,750	731.7	−2.2		55	2.80	nnw.	15.5		
						2,500	755.0	−0.4		54	3.19	nnw.	16.3		
						2,250	778.8	1.4		53	3.58	nnw.	17.1	1,700	
4:22	977.8	3.4	77	nnw.	2.7	2,073	795.9	2.7	0.43	52	3.86	nnw.	17.6		
						2,000	803.0	3.0		50	3.79	nnw.	17.6		
						1,750	828.0	4.1		43	3.52	nnw.	17.4	590	
						1,500	854.0	5.2		35	3.10	n.	17.3		
4:44	978.1	3.2	78	nnw.	2.2	1,284	877.2	6.1	−0.28	29	2.73	n.	17.2		
						1,250	880.7	6.0		30	2.80	n.	17.3	0	
						1,000	908.2	5.3		36	3.21	n.	17.6		
5:00	978.4	2.8	82	nnw.	2.2	756	936.0	4.6	−0.50	42	3.56	n.	18.0		
						750	936.7	4.6		43	3.65	n.	15.4		
						500	966.1	3.3		74	5.73	nnw.	6.8		
5:07	978.4	2.8	87	nnw.	2.2	396	978.4	2.8		87	6.50	nnw.	2.2		Cloudless.

November 12, 1918, series (No. 7).

A. M.															
5:53	978.7	1.6	83	nnw.	4.9	396	978.7	1.6		83	5.69	nnw.	4.9		Cloudless.
						500	966.5	5.0		58	5.06	nne.	11.5		
5:56	978.7	1.7	84	n.	6.3	550	960.5	6.6	−3.25	46	4.48	nne.	14.5		
						750	937.9	6.2		42	3.98	nne.	13.7	0	
						1,000	909.9	5.8		37	3.41	n.	12.6	380	Few Ci. St., wnw.
						1,250	882.3	5.3		32	2.85	n.	11.5		
6:25	979.1	1.0	85	n.	5.8	1,378	868.3	5.1	0.18	29	2.55	n.	11.0	420	
						1,500	855.3	4.2		28	2.31	nnw.	11.1		
						1,750	829.0	2.3		27	1.95	nnw.	11.3		
6:47	979.5	0.7	86	nnw.	6.3	1,943	809.9	0.8	0.76	26	1.68	nw.	11.4	1,500	
						2,000	803.9	0.6		26	1.66	nw.	11.7		
						2,250	779.5	−0.2		25	1.50	nw.	13.0		
						2,500	755.8	−1.0		24	1.35	wnw.	14.3		
						2,750	732.9	−1.8		23	1.21	wnw.	15.6		
6:57	979.7	0.8	86	nnw.	6.3	2,936	715.6	−2.4	0.32	22	1.10	wnw.	16.6	4,700	
						3,000	710.2	−2.4		22	1.10	wnw.	16.9		
						3,250	687.9	−2.2		21	1.07	nw.	17.9		
7:15	979.8	0.3	88	nnw.	6.3	3,381	676.7	−2.2	−0.04	21	1.07	nw.	18.0	6,700	1/10 Ci.St., wnw.
						3,500	666.2	−2.9		20	0.96	nw.	18.5		
						3,750	645.9	−4.3		19	0.81	nw.	19.5		
						4,000	626.3	−5.7		18	0.68	nw.	20.5		
7:34	979.9	0.0	86	nw.	2.7	4,080	619.7	−6.1	0.58	18	0.66	nw.	20.8	9,100	
						4,000	626.3	−5.5		18	0.69	nw.	20.6		
						3,750	647.0	−3.8		18	0.80	nw.	20.0		
						3,500	667.7	−2.1		18	0.92	wnw.	19.4		
7:58	980.1	1.4	82	nnw.	2.7	3,328	682.3	−1.6	0.51	18	0.96	wnw.	19.2		
						3,250	689.0	−1.4		18	0.98	wnw.	19.2		
						3,000	710.6	−0.6		18	1.05	wnw.	19.4		
						2,750	732.9	0.2		18	1.12	nw.	19.5	8,200	
						2,500	756.5	1.0		18	1.18	nw.	19.7		
8:22	980.2	2.3	82	n.	3.1	2,263	779.1	1.7	0.78	18	1.24	nw.	19.8		
						2,250	780.9	1.6		18	1.23	nw.	19.4		

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 12, 1918, series (No. 7)—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
8:30	980.3	2.9	75	nnw.	2.2	2,121	793.2	0.6	0.55	18	1.15	nw.	15.8	2,700	Solar halo, 22° radius from 8:30 to 9.05 a. m.
						2,000	805.6	1.5		19	1.29	nw.	14.9		
						1,750	830.7	3.3		20	1.55	nw.	13.1		
						1,500	856.8	4.0		22	1.79	nw.	11.3		
8:44	980.3	3.5	72	n.	2.7	1,390	868.3	4.6	0.60	23	1.95	nw.	10.5	560	
						1,250	883.6	5.4		24	2.15	nw.	10.2		
						1,000	910.9	6.9		25	2.49	nnw.	9.6	380	
9:01	980.4	4.0	74	n.	1.8	890	923.1	7.6	−0.26	25	2.61	n.	9.3		
						750	938.9	7.2		27	2.74	n.	8.9	0	
9:09	980.4	5.6	65	n.	1.8	619	954.0	6.9	−0.31	28	2.79	n.	8.5		
						500	968.0	6.5		47	4.55	nnw.	4.9		
9:12	980.4	6.2	63	nnw.	1.8	396	980.4	6.2		63	5.97	nnw.	1.8		2/10 Cl.St., nw.
November 13, 1918.															
A. M.															
7:47	972.5	2.6	81	sw.	5.4	396	972.5	2.6		81	5.96	sw.	5.4		Cloudless.
						500	960.3	6.2		65	6.16	sw.	10.1		
8:01	972.6	2.9	79	sw.	4.9	656	942.4	11.5	−3.43	42	5.70	wsw.	17.2		
						750	931.9	11.6		38	5.19	wsw.	17.4	0	
8:08	972.7	3.1	77	sw.	4.5	864	919.3	11.8	−0.14	34	4.71	wsw.	17.6		
						1,000	904.3	10.9		34	4.43	wsw.	16.4		
						1,250	877.7	9.3		34	3.98	w.	14.1	1,240	
8:23	972.8	3.6	75	sw.	4.9	1,445	857.2	8.1	0.64	34	3.67	w.	12.5		
						1,500	851.4	7.7		35	3.68	w.	12.0	2,200	
						1,750	825.9	6.1		39	3.67	w.	9.9	2,800	
						2,000	800.7	4.5		44	3.70	w.	7.7	3,000	Cloudless.
9:43	972.5	6.2	71	sw.	4.9	2,083	792.9	3.9	0.25	45	3.61	w.	7.0		
						2,250	776.4	3.5		44	3.45	w.	7.3		
						2,500	752.8	2.9		43	3.24	w.	7.8		
						2,750	730.0	2.3		41	2.96	w.	8.2	4,300	
10:02	972.3	7.0	69	sw.	5.4	2,832	717.5	1.9	0.44	40	2.80	w.	8.5		Few Cl., wnw.
						3,000	707.8	1.4		39	2.64	w.	8.7		
						3,250	686.3	0.3		37	2.31	wnw.	9.3		
						3,500	665.4	−0.7		36	2.07	nw.	9.8		
10:13	972.1	7.9	64	sw.	5.8	3,697	648.9	−1.6	0.44	34	1.82	nw.	10.2	4,800	
						3,500	665.4	−0.7		34	1.96	nw.	10.2		
						3,250	686.3	0.4		34	2.14	nw.	10.3		
						3,000	707.8	1.5		33	2.25	wnw.	10.3		
						2,750	730.0	2.6		33	2.43	wnw.	10.4		
10:40	971.6	9.0	65	sw.	5.8	2,624	741.5	3.2	0.42	33	2.54	wnw.	10.4	3,800	
						2,500	752.8	3.7		33	2.63	wnw.	10.1		
						2,250	776.4	4.8		33	2.84	wnw.	9.4	2,900	
						2,000	800.5	5.8		34	3.13	wsw.	8.8		
11:08	971.1	10.7	61	sw.	6.3	1,758	824.1	6.8	0.52	34	3.36	sw.	8.2	2,100	
						1,750	824.9	6.8		34	3.36	sw.	8.3		
						1,500	850.5	8.1		33	3.56	sw.	11.6		
						1,250	876.3	9.4		32	3.77	sw.	14.9	1,390	
11:31	970.6	11.4	56	wsw.	6.3	1,103	891.6	10.2	0.36	31	3.86	sw.	16.8		
						1,000	902.8	10.6		32	4.09	sw.	16.8		
11:37	970.4	11.6	57	sw.	4.9	824	921.8	11.2	−0.98	35	4.66	sw.	16.8		
						750	930.0	10.5		41	5.21	sw.	14.7		
11:45	970.3	11.9	59	sw.	4.9	650	941.1	9.5	1.06	48	5.70	sw.	11.9		
						500	958.0	11.1		53	7.00	sw.	8.1		
11:50	970.1	12.2	56	sw.	5.4	396	970.1	12.2		56	7.96	sw.	5.4		Few Cl., wnw.
November 14, 1918.															
A. M.															
7:41	961.1	9.9	87	ssw.	8.0	396	961.1	9.9		87	10.61	ssw.	8.0		7/10 St.Cu., ssw.
						500	949.0	11.1		84	11.10	ssw.	12.2		
7:47	961.1	10.2	86	ssw.	8.0	709	925.8	13.4	−1.12	77	11.83	ssw.	20.5		
						750	921.0	13.6		74	11.53	ssw.	20.8	560	
						1,000	894.3	15.0		59	10.06	ssw.	22.9		
7:53	961.1	10.3	85	ssw.	8.5	1,064	887.8	15.4	−0.56	55	9.62	ssw.	23.4	1,100	
						1,250	868.2	12.8		61	9.02	ssw.	24.1		
						1,500	842.5	9.4		74	8.72	ssw.	25.1		
8:04	961.1	10.5	86	ssw.	8.5	1,640	828.7	7.5	1.37	74	7.67	ssw.	25.6	1,800	
						1,750	817.5	6.5		79	7.65	ssw.	25.1		
						2,000	792.7	4.1		90	7.37	ssw.	24.0	2,500	8/10 St.Cu., ssw.
8:44	960.9	11.3	81	ssw.	8.5	2,173	775.9	2.5	0.98	97	7.09	ssw.	23.3	3,400	Altitude of St.Cu. base about 2,200 m.
						2,000	792.7	4.3		91	7.56	ssw.	23.3	2,700	
						1,750	817.5	7.8		79	8.36	ssw.	23.4		
9:19	960.8	11.9	80	ssw.	10.3	1,499	842.2	9.4	0.81	74	8.72	ssw.	23.4	2,400	
						1,250	868.0	11.4		67	9.03	ssw.	25.1		
						1,000	894.3	13.3		60	9.16	ssw.	26.6		
9:29	960.8	12.2	78	ssw.	8.5	881	906.6	14.4	−1.82	56	9.18	ssw.	27.5	680	4/10 Cl.St., wsw.; 5/10 St.Cu., ssw.
						750	921.0	12.0		66	9.26	ssw.	22.7		
9:44	960.8	13.0	74	ssw.	10.3	672	929.6	10.6	1.01	72	9.20	ssw.	19.9	0	
						500	949.0	12.3		73	10.45	ssw.	15.3		
9:48	960.8	13.4	73	ssw.	10.7	396	960.8	13.4		73	11.22	ssw.	10.7		8/10 St.Cu., ssw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 15, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
12:26	955.4	11.7	100	s.	6.7	396	955.4	11.7	.....	100	13.75	s.	6.7	.....	Dense fog from 11:20 a. m. to 1:30 p. m.
						500	943.1	10.5	.....	100	12.70	s.	11.2	.....	
12:29	955.4	11.7	100	s.	5.8	654	926.2	8.8	1.12	100	11.33	s.	17.8	.....	Light fog from 1:30 p. m. and continued at end of flight.
						750	915.8	9.2	.....	100	11.64	s.	18.1	1,600	
12:34	955.3	11.7	100	s.	5.4	877	901.7	9.8	−0.45	100	12.12	s.	18.4	.....	
						1,000	888.9	9.1	.....	100	11.56	s.	18.7	.....	
						1,250	862.1	7.6	.....	100	10.44	s.	19.4	2,400	
12:57	955.0	11.7	100	s.	5.4	1,500	836.2	6.1	.....	100	9.42	ssw.	20.1	2,800	
						1,708	814.9	4.9	0.59	100	8.66	ssw.	20.7	.....	
						1,750	811.0	5.1	.....	96	8.44	ssw.	20.2	.....	Misting throughout flight.
						2,000	786.6	6.2	.....	70	6.21	ssw.	17.0	3,000	
1:07	955.0	11.7	100	s.	5.4	2,194	768.0	7.0	−0.43	50	5.01	ssw.	14.6	3,500	
						2,250	763.0	6.3	.....	51	4.87	ssw.	13.8	.....	
1:11	954.9	11.7	100	s.	5.4	2,359	752.8	5.0	1.15	52	4.53	ssw.	12.1	.....	
						2,250	763.0	6.2	.....	51	4.84	ssw.	12.1	.....	
1:15	954.9	11.8	100	s.	6.3	2,096	777.5	7.9	−0.64	49	5.21	ssw.	12.1	.....	
						2,000	786.6	7.3	.....	62	6.34	ssw.	12.2	.....	
						1,750	811.0	5.7	.....	97	8.89	ssw.	12.4	1,600	
1:21	954.9	11.8	100	s.	5.4	1,737	812.4	5.6	0.49	99	9.01	ssw.	12.4	.....	
						1,500	836.2	6.8	.....	99	9.78	ssw.	13.1	.....	
						1,250	862.1	8.0	.....	99	11.37	ssw.	13.9	1,170	
1:48	954.8	12.0	100	s.	5.8	1,000	888.9	9.2	.....	99	11.52	s.	14.7	.....	
						756	914.5	10.4	0.44	99	12.48	s.	15.4	0	
						750	915.6	10.4	.....	99	12.48	s.	15.2	.....	
1:56	954.7	12.0	100	s.	5.8	500	942.9	11.5	.....	100	13.57	s.	8.6	.....	
						396	954.7	12.0	.....	100	14.03	s.	5.8	.....	10/10 Nb., s.

November 17, 1918.

P. M.															
4:33	961.8	3.7	83	nnw.	6.7	396	961.8	3.7	.....	83	6.61	nnw.	6.7	.....	10/10 St., nw.
						500	949.5	2.8	.....	84	6.28	nnw.	13.5	.....	Sprinkling rain throughout flight.
4:37	961.9	3.7	83	nnw.	5.8	708	925.4	1.0	0.87	85	5.85	nw.	27.2	0	
						750	920.5	0.6	.....	85	5.42	nw.	28.4	.....	Altitude of St. base about 850 m.
						1,000	891.9	−1.7	.....	88	4.66	nw.	35.5	.....	
4:50	962.0	3.7	83	nnw.	4.5	1,155	874.9	−3.2	0.70	90	4.21	nw.	39.9	.....	
						1,000	891.9	−2.5	.....	86	4.76	nw.	36.6	0	
						750	920.5	−1.3	.....	81	4.44	nw.	31.2	.....	
4:57	962.1	3.7	82	nnw.	4.5	720	924.1	−1.2	1.51	80	4.42	nw.	30.6	.....	
						500	949.5	2.1	.....	80	5.69	nnw.	13.8	.....	
5:03	962.1	3.7	80	nnw.	5.8	396	962.1	3.7	.....	80	6.37	nnw.	5.8	.....	10/10 St., nw.

November 18, 1918.

A. M.															
8:04	967.2	1.0	74	nnw.	4.5	396	967.2	1.0	.....	74	4.86	nnw.	4.5	.....	Few Cl., nw.
						500	954.5	0.0	.....	76	4.64	nnw.	8.5	.....	2/10 St., nnw.
						750	925.0	−2.4	.....	81	4.05	nw.	18.3	0	
8:18	967.2	1.1	71	nw.	7.2	871	911.2	−3.6	0.97	83	3.75	nw.	23.0	.....	
						1,000	896.8	−1.0	.....	81	4.55	nnw.	25.2	.....	
8:23	967.2	1.3	71	nw.	6.3	1,061	889.8	0.2	−2.00	80	4.96	nnw.	26.3	.....	
						1,250	869.2	−0.7	.....	76	4.38	nnw.	26.7	980	
8:36	967.2	1.4	70	nw.	7.6	1,424	850.3	−1.6	0.50	73	3.91	nnw.	27.1	.....	
						1,500	842.3	−1.0	.....	72	4.05	nnw.	27.1	.....	
8:39	967.2	1.4	70	nnw.	11.6	1,646	826.9	0.2	−0.81	69	4.28	nnw.	27.1	.....	
						1,750	816.4	−0.2	.....	67	4.03	nnw.	26.8	.....	Cloudless.
						2,000	791.4	−1.3	.....	62	3.40	nnw.	26.2	2,100	
						2,250	767.0	−2.4	.....	56	2.80	nnw.	25.5	.....	
						2,500	743.3	−3.4	.....	50	2.30	nnw.	24.8	3,000	
						2,750	720.0	−4.5	.....	44	1.84	nnw.	24.2	.....	
9:23	967.2	2.0	68	nnw.	10.7	2,786	717.0	−4.6	0.49	45	1.87	nnw.	24.1	3,900	
						2,750	720.0	−4.4	.....	45	1.90	nnw.	24.1	.....	
						2,500	743.3	−3.9	.....	43	2.04	nnw.	23.7	.....	
						2,250	767.0	−1.6	.....	41	2.19	nnw.	23.4	.....	
						2,000	791.4	−0.2	.....	39	2.34	nnw.	23.1	.....	
9:48	967.2	1.8	68	nw.	8.0	1,888	802.6	0.4	0.00	38	2.39	nnw.	22.9	.....	
9:59	967.2	2.1	66	nw.	9.8	1,923	799.1	0.4	−0.30	31	1.95	nnw.	19.6	2,300	
						1,750	816.4	−0.1	.....	46	2.79	nnw.	20.8	1,800	
						1,500	842.3	−0.9	.....	67	3.80	nw.	22.5	.....	
10:15	967.1	2.9	67	nw.	8.9	1,426	850.3	−1.1	0.44	73	4.07	nw.	23.0	1,080	
						1,250	869.2	−0.3	.....	71	4.23	nw.	23.8	.....	
10:34	967.0	3.0	63	nw.	9.8	1,084	887.3	0.4	−3.60	70	4.40	nw.	24.6	460	
						1,000	896.8	−2.6	.....	69	3.39	nw.	17.0	.....	
10:39	967.0	3.2	65	nw.	8.0	984	898.5	−3.2	0.98	69	3.23	nw.	15.5	.....	
10:46	967.0	3.1	63	nw.	14.3	750	925.3	−0.9	1.10	65	3.69	nw.	11.7	0	
						500	954.5	1.8	.....	64	4.45	nw.	10.7	.....	
10:51	967.0	3.0	63	nw.	10.3	396	967.0	3.0	.....	63	4.78	nw.	10.3	.....	Cloudless.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 19, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Electric potential.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:06	965.2	0.6	89	nnw.	5.4	396	965.2	0.6	.....	89	5.68	nnw.	5.4	.....	3/10 Ci.St., nw.; 1/10 St., nnw.
						500	952.8	1.7	.....	89	6.15	nnw.	10.6	.....	
7:12	965.3	0.6	89	nnw.	6.7	700	929.6	3.7	−1.02	88	7.00	nw.	20.5	330	Altitude of St. base about 650 m.
						750	923.8	3.5	.....	89	6.99	nw.	20.3	.....	
						1,000	895.8	2.3	.....	92	6.63	nw.	19.3	860	
						1,250	868.7	1.1	.....	95	6.29	nnw.	18.2	.....	
7:40	965.4	0.7	87	nnw.	4.0	1,500	842.1	0.1	0.45	98	6.03	nnw.	17.2	2,200	
						1,750	816.7	1.1	.....	86	5.69	nnw.	17.1	.....	
						2,000	791.6	2.0	.....	74	5.22	nnw.	17.0	.....	2/10 Ci.St., nw.; 1/10 St., nnw.
						2,250	767.4	3.0	.....	61	4.62	nnw.	16.9	3,200	
8:21	965.6	1.0	85	nnw.	4.5	2,298	762.8	3.2	−0.39	59	4.54	nww.	16.9	3,600	
						2,500	743.6	1.9	.....	58	4.07	nnw.	16.9	4,300	1/10 Ci.St., nw.; 6/10 St., nnw.
						2,750	721.0	0.3	.....	57	3.56	nnw.	16.9	7,200	
						3,000	699.4	−1.4	.....	56	3.05	nnw.	17.0	7,500	10/10 St., nnw.
						3,250	678.1	−3.0	.....	54	2.56	nnw.	17.0	.....	
9:30	965.9	0.7	92	nnw.	6.7	3,313	672.7	−3.4	0.64	54	2.48	nnw.	17.0	.....	
						3,250	678.1	−3.0	.....	54	2.56	nnw.	16.8	.....	
						3,000	699.7	−1.4	.....	54	2.94	nnw.	16.0	.....	
						2,750	722.0	0.2	.....	55	3.41	nnw.	15.2	5,100	
						2,500	744.9	1.8	.....	55	3.83	nnw.	14.5	.....	
10:00	965.9	0.8	91	nnw.	4.5	2,375	756.9	2.6	0.26	55	4.05	nnw.	14.1	.....	
						2,250	768.6	2.9	.....	57	4.29	nnw.	13.9	.....	
						2,000	792.6	3.6	.....	61	4.83	n.	13.4	4,600	
						1,750	817.6	4.2	.....	64	5.28	n.	12.9	.....	
10:20	965.9	0.8	96	n.	5.4	1,630	829.7	4.5	0.13	66	5.56	n.	12.7	3,600	
						1,500	843.0	4.7	.....	67	5.72	n.	12.5	.....	
						1,250	868.7	5.0	.....	70	6.10	n.	12.3	.....	
						1,000	895.8	5.3	.....	73	6.50	nnw.	12.0	2,200	
10:48	965.9	0.9	94	nnw.	3.6	782	920.6	5.6	−5.81	75	6.82	nnw.	11.7	.....	
						750	923.8	3.8	.....	81	6.50	nnw.	11.1	560	
10:51	965.9	1.0	94	nnw.	4.0	658	934.8	−1.6	1.07	97	5.19	nnw.	9.3	.....	Altitude of St. base about 500 m.
						500	953.1	0.1	.....	95	5.84	nnw.	7.0	.....	
10:58	965.9	1.2	93	nnw.	5.4	396	965.9	1.2	.....	93	6.19	nnw.	5.4	.....	10/10 St., nnw.

November 20, 1918.

A. M.															
8:00	973.6	1.4	84	n.	5.8	396	973.6	1.4	.....	84	5.68	n.	5.8	.....	10/10 St., n.
						500	961.0	0.4	.....	88	5.54	n.	7.1	.....	Altitude of St. base about 800 m.
						750	931.5	−1.8	.....	98	5.15	n.	10.7	.....	
8:07	973.7	1.4	85	n.	6.7	777	928.4	−2.1	0.92	99	5.08	n.	10.7	420	
						1,000	902.6	−3.7	.....	97	4.35	n.	.....	560	
						1,250	874.9	−5.4	.....	95	3.69	n.	.....	690	Misting began at 8:30, changed to snow (moist) at 9:13 a. m., and continued at end of flight.
8:40	974.3	1.5	86	n.	4.5	1,280	871.8	−5.6	0.70	95	3.62	n.	.....	.....	
						1,500	848.2	1.4	.....	29	1.96	n.	.....	2,900	
8:52	974.6	1.5	86	n.	6.3	1,510	847.2	1.7	− 3.18	26	1.80	n.	11.9	.....	10/10 St., n.
						1,750	822.3	1.9	.....	40	2.80	n.	13.9	.....	
8:57	974.6	1.5	86	nne.	6.3	1,758	821.5	1.9	− 0.08	41	2.87	n.	14.0	.....	
						1,750	822.3	1.9	.....	41	2.87	n.	14.0	.....	
9:09	974.7	1.4	87	n.	5.4	1,533	844.8	2.7	0.10	21	1.56	n.	12.2	4,000	
						1,750	822.3	2.8	.....	40	2.99	n.	11.1	.....	
9:14	974.8	1.3	91	n.	5.4	1,769	820.3	2.8	− 0.16	42	3.14	n.	11.0	.....	
						1,750	822.3	2.8	.....	41	3.06	n.	11.1	.....	
						1,500	848.2	2.1	.....	31	2.20	n.	12.8	2,500	
9:22	974.8	1.1	94	n.	4.0	1,442	854.6	1.9	−12.14	29	2.03	n.	13.2	.....	
9:23	974.8	1.1	94	n.	4.9	1,386	860.7	−4.9	0.50	91	3.69	n.	7.8	.....	
						1,250	874.9	−4.2	.....	91	3.91	n.	8.0	.....	
						1,000	903.1	−3.0	.....	92	4.37	n.	8.3	.....	
						750	932.5	−1.7	.....	92	4.88	n.	8.6	.....	
9:35	974.9	1.2	93	n.	4.5	687	940.1	−1.4	0.82	92	5.00	n.	8.7	.....	
						500	962.0	0.1	.....	93	5.64	nne.	6.6	.....	
9:39	974.9	1.0	94	nne.	5.4	396	974.9	1.0	.....	94	6.18	nne.	5.4	.....	10/10 St., n.

November 21, 1918.

A. M.															
7:56	979.4	−0.8	88	nne.	3.6	396	979.4	−0.8	.....	88	5.02	nne.	3.6	.....	10/10 St.Cu., nne.
						500	966.6	−1.5	.....	86	4.64	n.	.....	.....	Light snow at beginning of flight and continued at end.
8:12	979.5	−0.7	87	nne.	3.6	527	963.6	−1.7	0.69	85	4.50	n.	(*)	.....	
						750	936.6	−3.5	.....	88	4.01	nne.	.....	0	
8:26	979.5	−0.7	89	n.	3.6	968	911.3	−5.2	0.79	91	3.59	nne.	(*)	.....	Altitude of St. base about 900 m.
						1,000	907.4	−5.4	.....	91	3.53	nne.	.....	950	
						1,250	879.0	−6.9	.....	90	3.07	nne.	.....	1,010	
						1,500	851.3	−8.4	.....	89	2.66	nne.	.....	.....	
9:33	980.1	−0.6	91	nne.	3.6	1,509	850.9	−8.5	0.63	89	2.63	nne.	(*)	.....	
						1,500	851.3	−8.4	.....	89	2.66	nne.	.....	.....	
						1,250	879.4	−6.8	.....	89	3.06	nne.	.....	.....	
						1,000	908.0	−5.2	.....	90	3.55	nne.	.....	260	
						750	937.4	−3.6	.....	90	4.07	nne.	.....	.....	Altitude of St.Cu. base about 750 m.
9:49	980.3	−0.6	92	nne.	4.0	737	939.0	−3.5	0.85	90	4.10	nne.	(*)	.....	
						500	967.5	−1.5	.....	91	4.90	nne.	.....	.....	
9:56	980.4	−0.6	92	nne.	4.0	396	980.4	−0.6	.....	92	5.35	nne.	4.0	.....	10/10 St.Cu., nne.

*Anemometer cups frozen.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 22, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*° C.*	*%*		*m. p. s.*	*m.*	*mb.*	*° C.*		*%*	*mb.*		*m. p. s.*	*Volts.*	
8:24	985.6	−3.6	96	nne.	5.8	396	985.6	− 3.6	.....	96	4.45	nne.	5.8	.....	10/10 St.Cu., nne.
						500	972.7	− 4.6	.....	97	4.03	nne.	7.8	.....	Light snow at beginning of flight, became heavy and continued at end of flight.
						750	942.5	− 6.9	.....	100	3.41	nne.	12.5	.....	
8:31	985.7	−3.6	96	nne.	5.4	800	936.4	− 7.4	0.94	100	3.26	nne.	13.5	0	Apparently two layers of St.Cu. clouds.
						1,000	912.1	− 8.8	.....	100	2.89	nne.	12.4	.....	
						1,250	883.1	−10.6	.....	100	2.46	nne.	11.1	1,280	
						1,500	855.0	−12.4	.....	100	2.09	nne.	9.7	.....	Altitude of St.Cu. base (upper layer) about 1,450 m.
8:52	985.8	−3.6	96	nne.	5.4	1,564	847.9	−12.9	0.72	100	2.00	nne.	9.4	2,300	
						1,750	827.7	−14.3	.....	98	1.72	nne.	7.5	.....	Altitude St.Cu. base (lower layer) about 700 m.
9:42	986.3	−3.4	96	nne.	4.5	1,947	806.7	−15.8	0.76	96	1.47	nne.	5.4	3,800	
						2,000	801.2	−15.8	.....	96	1.47	nne.	5.4	.....	
						2,250	775.3	−14.9	.....	97	1.62	nne.	5.3	.....	
9:52	986.4	−3.4	96	nne.	4.0	2,474	752.6	−14.2	−0.10	97	1.73	nne.	5.3	3,200	
						2,250	775.3	−15.3	.....	96	1.54	nne.	6.7	.....	
9:59	986.5	−3.6	91	nne.	5.4	2,040	797.1	−16.4	0.74	96	1.39	nne.	8.0	.....	
						2,000	801.2	−16.1	.....	96	1.40	nne.	7.9	.....	
						1,750	828.0	−14.3	.....	97	1.71	nne.	7.0	1,400	
						1,500	855.8	−12.4	.....	98	2.05	nne.	6.1	.....	
10:11	988.5	−3.8	96	nne.	4.9	1,374	870.0	−11.5	0.72	98	2.22	nne.	5.6	700	
						1,250	884.0	−10.6	.....	98	2.41	nne.	6.3	.....	
						1,000	913.0	− 8.8	.....	99	2.86	nne.	7.8	780	
10:41	986.5	−3.8	91	nne.	5.8	752	942.8	− 7.0	0.93	100	3.38	nne.	9.2	0	
						500	973.5	− 4.7	.....	97	4.00	nne.	7.2	.....	
10:48	986.5	−3.7	96	nne.	6.3	396	986.5	− 3.7	.....	96	4.30	nne.	6.3	.....	6/10 St.Cu., nne.; 4/10 St., nne.

November 23, 1918.

A. M.															
7:49	987.2	−8.5	85	n.	4.5	396	987.2	− 8.5	.....	85	2.52	n.	4.5	.....	8/10 St.Cu., w.; 2/10 St.Cu., nnw.
						500	973.9	− 9.6	.....	85	2.29	n.	5.6	.....	Light snow flurries from 7:40 a. m. and continued at end of flight.
7:56	987.2	−8.5	81	n.	6.3	751	942.8	−12.2	1.04	86	1.83	nnw.	8.2	0	
						1,000	912.7	−13.8	.....	91	1.67	nw.	6.6	560	Two layers of clouds of same type; altitude of St.Cu. base (lower layer) about 950 m.
						1,250	882.8	−15.4	.....	97	1.54	wnw.	5.1	.....	
8:44	987.2	−8.2	77	n.	5.8	1,264	881.3	−15.5	0.64	97	1.52	wnw.	5.0	1,240	Altitude of St.Cu. base about 1,150 m.
10:08	987.2	−8.0	74	n.	4.9	1,465	858.0	−12.3	−1.75	58	1.22	wsw.	2.2	3,500	5/10 St.Cu., w.; 3/10 St.Cu., nnw.
10:34	987.0	−7.8	77	nnw.	4.5	1,259	881.3	−16.2	0.66	84	1.24	w.	7.6	2,500	
						1,250	882.0	−16.1	.....	84	1.25	w.	7.6	3,500	
						1,000	912.0	−14.5	.....	87	1.51	wnw.	6.6	0	7/10 St.Cu., w.; 3/10 St.Cu., nnw.
						750	942.8	−12.9	.....	90	1.80	nw.	5.6	.....	
10:48	987.0	−8.2	82	nnw.	6.3	634	957.0	−12.1	1.04	91	1.96	nw.	5.2	.....	Altitude of St.Cu. base (upper layer) about 1,100 m.; 10/10 St.Cu., w.
11:55	986.9	−8.2	82	nnw.	6.3	500	974.1	− 9.9	.....	86	2.25	nnw.	5.8	.....	
						396	986.9	− 8.2	.....	82	2.49	nnw.	6.3	.....	

November 24, 1918.

A. M.															
7:15	973.5	−10.4	87	wsw.	4.0	396	973.5	−10.4	.....	87	2.18	wsw.	4.0	.....	Few Ci., wnw.
						500	960.2	− 9.3	.....	82	2.26	wsw.	7.1	.....	
7:30	973.4	− 9.9	87	wsw.	3.6	620	945.7	− 8.0	−1.07	77	2.39	w.	10.6	.....	
						750	929.8	− 8.7	.....	77	2.24	w.	9.1	.....	
8:42	973.3	− 6.6	87	wsw.	2.7	951	906.0	− 9.9	0.57	77	2.02	wnw.	6.7	560	
						1,000	900.0	−10.2	.....	77	1.96	wnw.	6.8	.....	
						1,250	871.4	−11.8	.....	76	1.68	w.	7.2	.....	
9:40	973.1	− 5.6	75	w.	3.1	1,340	861.5	−12.4	0.64	76	1.59	w.	7.4	.....	
						1,500	843.6	−12.0	.....	74	1.61	w.	7.3	.....	
						1,750	816.3	−11.3	.....	70	1.62	wsw.	7.2	.....	
9:46	973.1	− 5.2	77	wsw.	3.1	1,832	807.9	−11.1	−0.22	69	1.62	wsw.	7.2	.....	
						1,750	816.3	−11.2	.....	69	1.61	wsw.	7.4	.....	
						1,500	843.6	−11.7	.....	71	1.58	wsw.	8.0	.....	
10:01	973.0	− 5.0	76	wsw.	3.1	1,305	865.2	−12.0	0.58	72	1.56	wsw.	8.4	.....	
						1,250	871.4	−11.7	.....	73	1.63	wsw.	8.3	.....	
						1,000	900.0	−10.2	.....	75	1.91	wsw.	7.7	.....	
						750	929.8	− 8.8	.....	77	2.23	w.	7.2	.....	
10:12	972.9	− 4.6	75	wsw.	2.7	671	939.2	− 8.3	1.49	78	2.35	w.	7.0	.....	
						500	959.7	− 5.7	.....	74	2.80	wsw.	4.3	.....	
10:17	972.9	− 4.2	72	wsw.	2.7	396	972.9	− 4.2	.....	72	3.10	wsw.	2.7	.....	Few Ci., wnw.; few St.Cu., wsw.

November 25, 1918.

A. M.															
7:23	972.9	−5.4	95	wsw.	4.0	396	972.9	−5.4	.....	95	3.69	wsw.	4.0	.....	Few A.Cu., wsw.
						500	960.2	−4.0	.....	82	3.58	w.	6.9	.....	
7:48	973.2	−4.3	90	wsw.	4.0	562	953.0	−3.1	−1.39	74	3.49	w.	8.7	.....	
						750	933.5	−4.5	.....	76	3.15	w.	7.9	.....	
						1,000	901.4	−6.5	.....	80	2.82	wnw.	6.7	0	
						1,250	873.4	−8.4	.....	83	2.48	wnw.	5.6	590	
8:48	973.9	−2.1	80	sw.	2.7	1,307	857.2	−8.8	0.76	84	2.43	wnw.	5.3	.....	
						1,500	846.2	−6.0	.....	70	2.58	nw.	3.5	.....	
9:04	974.0	−2.4	83	wsw.	3.1	1,615	834.0	−4.4	−1.17	62	2.62	nw.	2.4	460	
						1,500	846.2	−5.4	.....	65	2.52	nw.	2.8	.....	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 25, 1918—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
9:10	974.0	−2.1	82	WSW.	3.6	1,265	872.1	−7.6	0.60	71	2.28	WNW.	3.5	380	
						1,250	874.0	−7.5		71	2.29	WNW.	3.6		
						1,000	902.2	−6.0		73	2.69	WNW.	5.4	0	
						750	931.5	−4.5		76	3.18	W.	7.2		
9:40	974.2	−1.6	83	W.	3.1	614	947.8	−3.7	1.01	77	3.45	W.	8.2		
						500	961.5	−2.6		82	4.03	W.	5.3		
9:43	974.2	−1.5	86	W.	2.7	396	974.2	−1.5		86	4.64	W.	2.7		Few A.Cu., WSW.

November 26, 1918.

P. M.															
6:18	970.8	0.0	85	SSW.	3.6	396	970.8	0.0		85	5.19	SSW.	3.6		Cloudless.
						500	958.6	0.6		71	4.53	SW.	8.3		
6:19	970.8	0.0	84	SSW.	3.6	571	949.9	1.0	−0.57	62	4.07	SW.	11.5		
						750	928.6	−0.1		61	3.70	SW.	10.8	0	
6:30	970.8	0.0	81	SSW.	3.6	936	907.5	−1.3	0.63	60	3.29	SW.	10.0		
						1,000	899.7	−0.1		46	2.79	SW.	9.0	330	
7:22	970.3	0.0	69	SSW.	4.5	1,109	887.6	2.0	−1.91	22	1.55	WSW.	7.4	890	
						1,250	872.0	1.5		22	1.50	WSW.	7.1		
						1,500	845.8	0.5		22	1.39	WSW.	6.6		
						1,750	820.0	−0.5		22	1.29	WSW.	6.1		
						2,000	794.6	−1.4		22	1.20	WSW.	5.6		
7:32	970.2	0.2	67	SSW.	5.4	2,139	780.7	−1.9	0.42	22	1.15	WSW.	5.3		
						2,000	794.6	−1.3		22	1.21	WSW.	5.8	1,280	
						1,750	820.0	−0.1		23	1.39	WSW.	6.6		
						1,500	845.8	1.1		23	1.52	SW.	7.5		
						1,250	872.0	2.2		24	1.72	SW.	8.3	590	
8:03	969.9	−0.2	72	SSW.	6.7	1,109	887.6	2.9	−1.42	24	1.81	SW.	8.8	0	
						1,000	899.7	1.3		24	1.61	SW.	9.6		
8:08	969.8	−0.4	73	SSW.	6.3	884	912.6	−0.3	0.55	25	1.49	SW.	10.4	0	
						750	928.6	0.4		28	1.76	SW.	8.8		
						500	957.8	1.8		34	2.37	SW.	5.8		
8:17	969.7	−0.4	73	SW.	6.7	464	961.6	2.0	−3.53	35	2.47	SW.	5.4		
8:18	969.7	−0.4	73	SW.	6.7	396	969.7	−0.4		73	4.31	SW.	6.7		Cloudless.

November 27, 1918.

A. M.															
7:27	966.1	−3.0	87	SSW.	7.6	396	966.1	− 3.0		87	4.13	SSW.	7.6		Few A.Cu., near horizon.
						500	953.7	− 1.6		79	4.23	SSW.	9.1		
7:31	966.0	−2.9	87	SSW.	6.7	724	927.0	1.3	−1.31	62	4.16	SSW.	12.3	330	
						750	924.0	1.4		61	4.12	SSW.	12.6		
						1,000	896.0	2.6		50	3.69	SSW.	15.3		
7:38	966.0	−2.8	87	SSW.	7.2	1,144	880.1	3.3	−0.48	43	3.33	SSW.	16.8		
						1,250	868.8	3.3		39	3.02	SSW.	16.1	1,600	
						1,500	842.4	3.3		31	2.40	SSW.	14.5		
7:50	965.9	−2.8	91	SSW.	5.8	1,634	828.4	3.3	0.0	26	2.01	SSW.	13.7		
						1,750	816.8	2.6		32	2.36	SSW.	13.8	3,400	
						2,000	791.4	1.1		44	2.91	SSW.	14.0		
8:11	965.8	−2.4	83	S.	4.0	2,142	777.7	0.3	0.59	51	3.18	SSW.	14.1		
						2,250	767.2	− 0.2		50	3.00	SSW.	14.1		
						2,500	743.6	− 1.2		49	2.71	SSW.	14.1	6,000	
						2,750	721.0	− 2.3		47	2.37	SSW.	14.1		
						3,000	698.3	− 3.3		45	2.09	SSW.	14.1	8,000	
8:35	965.7	−1.4	78	SSW.	7.2	3,016	696.8	− 3.4	0.42	45	2.07	SSW.	14.1		
						3,250	676.4	− 5.1		53	2.11	SSW.	15.2		
						3,500	655.0	− 6.8		61	2.10	SSW.	16.4	9,800	
						3,750	634.4	− 8.6		70	2.06	SSW.	17.6		
9:05	965.5	−0.1	75	SSW.	8.9	4,113	605.2	−11.2	0.66	83	1.93	SSW.	19.3	13,600	1/10 A.Cu., s.
						4,000	614.6	−10.5		85	2.11	SSW.	18.5	12,700	
						3,750	634.4	− 8.9		90	2.57	SSW.	16.8		
						3,500	654.8	− 7.4		95	3.10	S.	15.0		
9:32	965.5	0.7	72	SSW.	7.6	3,438	660.1	− 7.0	0.72	96	3.24	S.	14.6	6,600	
						3,250	675.9	− 5.6		92	3.51	S.	14.5		
						3,000	697.7	− 3.8		87	3.86	SSW.	14.3		
						2,750	720.4	− 2.1		82	4.21	SSW.	14.2		
9:52	965.5	1.1	74	SSW.	6.7	2,631	731.1	− 1.2	0.39	80	4.42	SSW.	14.1	5,800	
						2,500	743.6	− 0.7		78	4.49	SSW.	14.4		
						2,250	767.2	0.3		75	4.68	SSW.	15.1		
						2,000	791.0	1.3		71	4.76	SSW.	15.8		1/10 Cl. St., SSW.; 2/10 A.Cu., s.
						1,750	815.9	2.3		68	4.90	SSW.	16.4	4,600	
10:17	965.1	1.8	72	SSW.	5.8	1,613	829.6	2.8	−0.09	66	4.93	SSW.	16.8		
						1,500	841.5	2.7		56	4.16	SSW.	16.7		
10:28	964.9	2.1	68	SSW.	6.7	1,271	865.2	2.5	−1.21	35	2.56	SSW.	16.6	2,700	5/10 Cl.St., SSW.; 2/10 A.Cu., s.
						1,250	867.8	2.3		36	2.60	SSW.	16.7		
						1,000	894.9	− 0.8		43	2.46	SSW.	17.6		
10:34	964.8	2.4	66	SSW.	8.9	974	897.6	− 1.1	0.22	44	2.45	SSW.	17.7		
						750	923.2	− 0.6		64	3.72	SSW.	12.3	840	
0:45	964.5	2.7	66	SSW.	7.2	659	933.5	− 0.4	1.22	72	4.26	SSW.	10.1		
						500	952.2	1.2		70	4.66	SSW.	8.6		
49	964.4	2.8	69	SSW.	7.6	396	964.4	2.8		69	5.15	SSW.	7.6		7/10 Cl.St., SSW.; 2/10 A.Cu., s.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 28, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
8:21	951.6	−0.2	92	nnw.	3.1	396	951.6	−0.2	.....	92	5.53	nnw.	3.1	.....	8/10 A.St., wnw.; 2/10 St.Cu., nnw
						500	939.3	−1.0	.....	89	5.00	nnw.	13.6	.....	
8:32	951.9	−0.5	88	nnw.	3.1	605	927.2	−1.8	0.77	86	4.52	nnw.	24.1	.....	
						750	910.7	−2.1	.....	85	4.36	nnw.	23.0	0	
						1,000	882.6	−2.7	.....	84	4.10	nnw.	21.0	.....	
8:40	952.1	−0.6	88	nnw.	2.7	1,080	873.6	−2.9	0.23	84	4.03	nnw.	20.4	1,200	
						1,250	855.1	−3.6	.....	84	3.80	nnw.	21.5	.....	
						1,500	828.5	−4.5	.....	83	3.48	nnw.	23.0	3,000	
						1,750	802.7	−5.5	.....	83	3.19	nnw.	24.6	3,800	
8:53	952.4	−1.1	84	nnw.	2.7	1,791	798.6	−5.7	0.39	83	3.14	nnw.	24.9	.....	
						2,000	777.7	−6.0	.....	77	2.83	nnw.	23.9	5,000	
						2,250	753.7	−6.4	.....	69	2.46	nnw.	22.6	.....	
9:15	952.9	−1.6	83	nnw.	3.1	2,500	729.8	−6.8	0.16	62	2.13	nnw.	21.4	.....	7/10 Cl.St., w.; 2/10 A.St., wnw.
						2,500	729.8	−6.8	.....	61	2.13	nnw.	21.2	6,000	
						2,250	753.7	−6.3	.....	66	2.37	nnw.	20.5	.....	
9:30	953.2	−2.0	83	nnw.	2.7	2,000	778.4	−5.9	.....	71	2.63	nnw.	19.8	.....	
						1,903	787.8	−5.7	0.34	73	2.76	nnw.	19.5	.....	
						1,750	804.0	−5.2	.....	72	2.84	nnw.	22.5	.....	
						1,500	829.9	−4.3	.....	70	2.98	nnw.	27.5	.....	
9:42	953.4	−1.9	81	nnw.	2.7	1,352	845.1	−3.8	0.38	69	3.06	nnw.	30.4	.....	
						1,250	856.3	−3.4	.....	71	3.27	nnw.	28.8	2,500	
						1,000	883.9	−2.5	.....	76	3.77	nnw.	24.9	1,800	2/10 Cl.St., w.; 1/10 A.St., wnw.
10:11	953.8	−1.9	80	nnw.	4.0	822	903.9	−1.8	−0.58	80	4.21	nnw.	22.1	.....	
						750	912.2	−2.2	.....	81	4.12	nnw.	19.9	560	
10:21	953.8	−1.8	79	nnw.	5.4	631	925.9	−2.9	0.47	82	3.94	nnw.	16.3	.....	
						500	941.3	−2.3	.....	80	4.03	nnw.	10.4	.....	
10:23	953.9	−1.8	79	nnw.	5.8	396	953.9	−1.8	.....	79	4.16	nnw.	5.8	.....	Few Cl.St., w.; few A.St., wnw.

November 29, 1918.

A. M.															
7:29	969.0	−7.0	89	wnw.	4.5	396	969.0	− 7.0	.....	89	3.01	wnw.	4.5	.....	Few Cl., wnw.
						500	956.8	− 4.3	.....	80	3.41	nw.	8.2	.....	
7:34	969.2	−7.2	89	wnw.	4.5	594	945.2	− 1.8	−2.63	72	3.79	nw.	11.6	.....	
						750	927.6	− 1.6	.....	71	3.80	nw.	11.3	.....	
7:58	969.8	−6.7	90	wnw.	4.5	765	925.7	0.0	−1.05	58	3.54	nw.	8.4	0	
						1,000	899.0	− 1.3	.....	60	3.29	nw.	8.7	.....	Few Cl., wnw.; few A.Cu., wnw.
						1,250	871.4	− 2.7	.....	62	3.03	wnw.	9.0	860	
						1,500	844.7	− 4.0	.....	64	2.80	wnw.	9.3	.....	
8:22	970.2	−6.2	87	nw.	4.9	1,547	839.3	− 4.3	0.55	64	2.73	wnw.	9.4	2,300	
						1,750	818.0	− 5.8	.....	64	2.40	wnw.	9.5	.....	
						2,000	792.4	− 7.7	.....	64	2.01	wnw.	9.6	2,500	
						2,250	767.3	− 9.6	.....	65	1.75	w.	9.7	.....	
						2,500	742.9	−11.5	.....	65	1.48	w.	9.8	.....	
8:51	970.5	−5.5	86	nw.	3.6	2,588	734.2	−12.2	0.76	65	1.38	w.	9.8	5,100	
						2,750	719.0	−13.1	.....	66	1.29	w.	10.5	6,000	
						3,000	695.7	−14.5	.....	68	1.18	w.	11.5	.....	
						3,250	673.2	−15.9	.....	70	1.06	w.	12.5	.....	
						3,500	651.3	−17.2	.....	71	0.95	w.	13.5	8,000	
9:48	970.8	−4.0	82	nw.	7.7	3,605	642.2	−17.8	0.55	72	0.91	w.	13.9	.....	
						3,750	630.0	−18.7	.....	71	0.82	w.	14.2	.....	
						4,000	608.5	−20.2	.....	69	0.70	w.	14.6	.....	Few A.Cu., wnw.
						4,250	588.0	−21.8	.....	66	0.57	w.	15.1	10,500	
						4,500	568.5	−23.3	.....	64	0.47	w.	15.6	.....	
						4,750	550.2	−24.9	.....	62	0.39	w.	16.0	.....	
10:30	971.1	−2.7	76	nw.	3.6	4,771	548.4	−25.0	0.64	62	0.38	w.	16.0	.....	
						4,750	550.2	−24.9	.....	62	0.39	w.	16.0	.....	
						4,500	568.5	−23.2	.....	59	0.44	w.	16.2	12,000	
						4,250	588.0	−21.6	.....	56	0.49	w.	16.4	.....	
10:54	971.3	−2.0	75	nw.	5.8	3,999	609.0	−20.0	0.59	53	0.55	w.	16.6	.....	
						3,750	630.0	−18.5	.....	59	0.70	w.	15.9	.....	
						3,500	651.3	−17.1	.....	65	0.88	w.	15.2	7,000	
						3,250	673.2	−15.6	.....	72	1.12	w.	14.6	.....	
11:18	971.4	−1.4	69	nw.	3.1	3,115	685.2	−14.8	0.58	75	1.26	w.	14.2	.....	
						3,000	695.7	−14.1	.....	77	1.38	w.	13.3	.....	
						2,750	719.0	−12.4	.....	81	1.69	w.	10.8	5,500	
						2,500	742.9	−10.6	.....	86	2.12	wnw.	8.3	.....	
11:34	971.5	−1.0	65	nnw.	5.8	2,327	759.9	−10.2	0.58	87	2.22	wnw.	7.7	.....	
						2,250	767.3	− 9.8	.....	85	2.24	wnw.	8.0	.....	
						2,000	792.4	− 8.3	.....	80	2.42	wnw.	9.0	3,600	
						1,750	818.0	− 6.9	.....	75	2.56	nw.	10.0	.....	
11:50	971.6	−0.5	68	nw.	2.7	1,669	827.0	− 6.4	0.54	74	2.63	nw.	10.3	.....	
						1,500	844.9	− 5.5	.....	72	2.76	nw.	10.5	1,100	
						1,250	872.5	− 4.2	.....	69	2.97	nnw.	10.8	.....	
P. M.															
12:03	971.6	−0.5	68	nnw.	3.6	1,037	896.2	− 3.0	0.05	66	3.14	nnw.	11.1	0	
						1,000	900.7	− 3.0	.....	67	3.18	nnw.	10.9	.....	
						750	929.5	− 2.9	.....	74	3.55	nw.	9.3	.....	
12:16	971.6	−0.2	69	nnw.	3.6	648	941.3	− 2.8	1.03	77	3.73	nw.	8.6	.....	
						500	959.0	− 1.5	.....	73	3.94	nnw.	6.2	.....	
12:20	971.6	−0.2	71	nnw.	4.5	396	971.6	− 0.2	.....	71	4.27	nnw.	4.5	.....	1/10 A.Cu., wnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, November, 1918*—Continued.

November 30, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*Volts.*	
7:24	971.8	−6.2	89	SW.	5.8	396	971.8	− 6.2	.....	89	3.22	SW.	5.8	.....	Cloudless.
						500	959.0	− 3.5	.....	75	3.42	WSW.	8.8	.....	
7:34	971.8	−6.6	95	SW.	5.8	739	930.8	2.6	−2.57	44	3.24	W.	15.8	0	
						750	929.4	2.5	.....	44	3.22	W.	15.8	.....	
						1,000	900.6	0.7	.....	43	2.76	W.	15.2	.....	
						1,250	873.0	− 1.1	.....	41	2.28	WNW.	14.6	2,300	
						1,500	846.4	− 2.9	.....	40	1.92	WNW.	14.0	.....	
7:55	971.6	−6.0	95	SW.	6.3	1,611	834.6	− 3.7	0.72	39	1.75	WNW.	13.7	.....	
						1,750	820.4	− 4.1	.....	38	1.65	WNW.	13.7	4,400	
						2,000	795.0	− 4.8	.....	36	1.47	WNW.	13.6	.....	
						2,250	770.6	− 5.5	.....	34	1.31	WNW.	13.5	.....	
8:20	971.5	−4.1	85	SW.	6.3	2,385	756.8	− 5.9	0.28	33	1.22	WNW.	13.5	6,000	
						2,500	746.0	− 6.4	.....	36	1.28	WNW.	13.6	.....	
						2,750	722.2	− 7.6	.....	41	1.32	WNW.	13.8	.....	
						3,000	699.4	− 8.8	.....	47	1.36	NW.	14.1	9,000	
						3,250	677.6	−10.0	.....	53	1.38	NW.	14.3	.....	
						3,500	656.6	−11.1	.....	59	1.39	NW.	14.5	10,500	
8:53	971.3	−2.5	73	SW.	4.9	3,556	651.7	−11.4	0.47	60	1.37	NW.	14.6	.....	
						3,750	635.8	−11.7	.....	58	1.29	NW.	15.8	.....	
						4,000	615.4	−12.1	.....	55	1.18	NNW.	17.4	12,000	
						4,250	595.5	−12.5	.....	52	1.08	NNW.	19.0	.....	
9:25	971.3	−1.0	69	SW.	4.9	4,370	585.9	−12.7	0.24	51	1.04	NNW.	19.8	12,800	
						4,250	595.5	−12.3	.....	52	1.10	NNW.	19.7	.....	
						4,000	615.4	−11.6	.....	53	1.19	NNW.	19.6	.....	
						3,750	635.8	−10.8	.....	54	1.31	NW.	19.4	8,700	
						3,500	656.6	−10.0	.....	55	1.43	NW.	19.3	.....	
10:03	971.3	−0.7	75	SW.	4.9	3,257	677.0	− 9.3	0.46	56	1.55	NW.	19.1	6,300	
						3,250	677.6	− 9.3	.....	56	1.55	NW.	19.0	.....	
						3,000	699.4	− 8.1	.....	59	1.81	NW.	16.7	.....	
						2,750	722.2	− 7.0	.....	62	2.10	WNW.	14.4	.....	
						2,500	746.0	− 5.8	.....	64	2.40	WNW.	12.1	3,700	
10:25	970.9	0.9	77	SW.	4.9	2,452	751.0	− 5.6	0.51	65	2.48	WNW.	11.6	.....	
						2,250	770.6	− 4.6	.....	58	2.41	WNW.	11.8	.....	
						2,000	795.0	− 3.3	.....	50	2.32	WNW.	12.1	2,300	
						1,750	820.1	− 2.0	.....	42	2.17	WNW.	12.3	.....	
10:42	970.6	−0.1	70	WSW.	6.3	1,669	828.4	− 1.6	0.61	39	2.09	WNW.	12.4	.....	
						1,500	846.0	− 0.6	.....	39	2.27	WNW.	11.9	.....	
						1,250	872.7	1.0	.....	39	2.56	WNW.	11.2	.....	
						1,000	900.4	2.5	.....	40	2.92	W.	10.4	.....	
11:05	970.2	0.1	73	WSW.	7.2	752	928.2	4.0	−1.78	40	3.25	W.	9.7	0	
						500	957.9	− 0.5	.....	56	3.28	WSW.	9.7	.....	
11:08	970.1	0.2	74	WSW.	7.2	494	958.2	− 0.6	0.82	56	3.25	WSW.	9.7	.....	
11:09	970.0	0.2	74	WSW.	6.7	396	970.0	0.2	.....	74	4.59	WSW.	6.7	.....	Cloudless.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918.*

December 1, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
10:56	963.5	4.8	72	nw.	8.9	396	963.5	4.8	.....	72	6.19	nw.	8.9	.....	2/10 A.Cu., wsw.; 6/10 St.Cu., nw.
						500	950.9	4.0	.....	73	5.93	nw.	11.6	.....	
11:10	963.5	4.8	72	nw.	8.0	688	929.5	2.6	0.75	76	5.60	nw.	16.5	.....	
						750	922.0	2.1	.....	77	5.47	nw.	17.1	0	
						1,000	893.8	−0.2	.....	83	4.99	nnw.	19.8	.....	
11:20	963.5	4.7	74	nnw.	8.9	1,127	880.0	−1.3	0.89	86	4.71	nnw.	21.1	.....	4/10 A.Cu., wsw.; 3/10 St.Cu., nw.
						1,250	866.3	−1.9	.....	76	3.97	nnw.	23.1	1,900	
11:45	963.5	4.7	70	nnw.	8.5	1,435	846.7	−2.8	0.49	62	3.00	nnw.	26.0	2,100	
						1,500	839.2	−3.6	.....	67	3.03	nnw.	23.2	.....	
P. M.															
12:10	963.5	4.9	70	nnw.	7.2	1,689	819.7	−4.6	0.70	74	3.07	nnw.	19.3	2,750	
						1,500	839.2	−4.1	.....	78	3.38	nnw.	20.9	2,300	
						1,250	856.3	−3.5	.....	84	3.74	nnw.	22.9	.....	
12:44	963.5	5.2	69	nnw.	10.3	1,240	867.6	−3.5	0.99	84	3.83	nnw.	23.0	1,640	5/10 A.Cu., wsw.; 2/10 Cu., nnw.
12:52	963.5	5.1	68	nnw.	14.8	1,000	886.2	−1.8	0.99	84	4.42	nnw.	22.6	.....	
						1,000	893.8	−1.1	.....	82	4.57	nnw.	22.6	.....	
1:03	963.5	4.9	67	nnw.	11.2	755	921.7	1.3	0.98	74	4.97	nnw.	22.6	0	
						500	950.9	3.8	.....	69	5.53	nnw.	13.9	.....	
1:08	963.5	4.8	67	nnw.	10.3	396	963.5	4.8	.....	67	5.76	nnw.	10.3	.....	5/10 A.Cu., wsw.; 2/10 Cu., nnw.

December 2, 1918.

A. M.															
7:24	966.7	−1.2	88	w.	4.5	396	966.7	−1.2	.....	88	4.87	w.	4.0	.....	2/10 A.Cu., nw.
						500	954.0	0.0	.....	80	4.89	wnw.	9.0	.....	
7:27	966.9	−1.2	88	w.	4.9	596	942.9	1.1	−1.15	73	4.83	wnw.	13.7	.....	
						750	925.0	0.8	.....	66	4.27	wnw.	14.4	0	
						1,000	896.5	0.4	.....	57	3.59	nw.	15.5	.....	
7:45	966.8	−1.0	84	w.	5.4	1,192	875.4	0.0	0.18	50	3.06	nw.	16.4	1,280	
						1,250	869.0	−0.4	.....	51	3.01	nw.	16.4	.....	
						1,500	842.4	−2.1	.....	54	2.77	nw.	16.5	.....	
						1,750	816.0	−3.8	.....	57	2.53	nw.	16.6	2,500	7/10 A.Cu., nw.
8:06	966.9	−0.5	81	w.	5.8	1,902	800.7	−4.8	0.68	59	2.41	nw.	16.7	.....	
						2,000	790.6	−5.4	.....	61	2.37	nw.	17.6	.....	
						2,250	766.1	−7.1	.....	68	2.28	nw.	20.0	4,200	
8:22	967.0	0.4	79	w.	5.8	2,320	759.2	−7.6	0.67	70	2.25	nw.	20.7	.....	
						2,500	741.9	−7.9	.....	63	1.97	nw.	22.2	.....	
						2,750	718.5	−8.3	.....	53	1.60	nw.	24.2	6,400	
						3,000	696.1	−8.7	.....	44	1.28	nw.	26.2	.....	
						3,250	674.0	−9.1	.....	34	0.95	nw.	28.3	.....	7/10 A.Cu., nw.
8:50	967.1	0.9	79	w.	5.8	3,305	669.1	−9.2	0.28	32	0.89	nw.	28.7	8,600	
						3,250	674.0	−9.0	.....	32	0.91	nw.	27.9	.....	2/10 Cl.Cu., nw.; 2/10 A.St., nw.; 3/10 A.Cu., nw.
						3,000	696.1	−8.0	.....	33	1.02	nw.	24.3	.....	
9:27	967.2	1.8	77	w.	7.2	2,857	708.2	−7.4	0.07	33	1.08	nw.	22.3	.....	
						2,750	718.5	−7.3	.....	39	1.28	nw.	23.3	5,700	
						2,500	741.9	−7.1	.....	52	1.74	nw.	25.5	.....	
9:47	967.2	1.9	75	w.	6.3	2,310	760.4	−7.0	0.59	62	2.10	nw.	27.1	4,200	
						2,250	766.1	−6.6	.....	62	2.17	nw.	26.2	.....	
						2,000	790.6	−5.2	.....	63	2.48	nw.	22.3	.....	
						1,750	816.0	−3.7	.....	65	2.91	wnw.	18.3	2,000	
						1,500	842.4	−2.2	.....	66	3.36	wnw.	14.4	.....	
10:17	967.0	3.3	71	w.	5.8	1,484	844.6	−2.1	0.72	66	3.39	wnw.	14.2	.....	
						1,250	869.0	−0.4	.....	61	3.61	wnw.	13.8	0	
						1,000	896.5	1.4	.....	56	3.79	wnw.	13.4	.....	
10:32	966.8	3.2	69	w.	4.5	856	913.1	2.4	−0.35	53	3.85	wnw.	13.2	.....	1/10 A.St., nw.; 8/10 A.Cu., nw.
						750	925.0	2.0	.....	60	4.24	wnw.	12.9	.....	
10:41	966.7	3.4	68	w.	4.0	598	942.9	1.5	0.99	70	4.77	w.	12.5	.....	
						500	954.0	2.5	.....	69	5.04	w.	8.4	.....	
10:43	966.7	3.5	68	w.	4.0	396	966.7	3.5	.....	68	5.34	w.	4.0	.....	1/10 A.St., nw.; 8/10 A.Cu., nw.

December 3, 1918.

A. M.															
7:24	964.6	2.9	73	wnw.	4.0	396	964.6	2.9	.....	73	7.53	wnw.	3.1	.....	7/10 A.Cu., nw.
						500	952.4	6.7	.....	59	5.79	wnw.	17.4	.....	
7:27	964.6	2.8	74	wnw.	4.0	511	951.0	7.1	−3.66	58	5.85	wnw.	18.9	.....	
7:35	964.7	2.9	75	wnw.	5.4	683	931.5	6.9	0.12	53	5.27	wnw.	18.1	.....	
						750	924.0	6.5	.....	52	5.03	wnw.	18.4	.....	
						1,000	896.0	5.0	.....	49	4.27	wnw.	19.7	.....	
7:46	964.7	3.0	73	wnw.	4.9	1,188	875.7	3.9	0.59	46	3.72	wnw.	20.7	0	
						1,250	868.7	3.4	.....	48	3.74	wnw.	20.7	.....	3/10 Cl.St., nw.; 2/10 A.Cu., nw.
						1,500	842.2	1.3	.....	56	3.76	wnw.	20.7	.....	
						1,750	816.5	−0.9	.....	63	3.57	nw.	20.8	2,000	
8:03	964.8	3.0	77	wnw.	3.1	1,977	793.9	−2.8	0.85	70	3.39	nw.	20.8	.....	
						2,000	791.3	−3.0	.....	70	3.32	nw.	20.5	.....	
						2,250	766.6	−4.7	.....	69	2.84	nw.	20.4	3,300	
						2,500	742.5	−6.4	.....	68	2.42	nw.	20.1	4,200	Faint solar halo, 22° radius, began 8:28 a. m. and continued at end of flight.
						2,750	719.0	−8.1	.....	67	2.06	nw.	19.7	.....	
8:39	965.1	4.0	74	wnw.	4.0	2,986	699.6	−9.6	0.66	66	1.78	nw.	19.4	5,500	
						2,750	719.0	−8.2	.....	68	2.07	nw.	20.5	.....	6/10 Cl.St., nw.; 2/10 A.Cu., nw.
						2,500	742.5	−6.7	.....	70	2.43	nw.	21.7	.....	
						2,250	766.6	−5.1	.....	73	2.91	nw.	22.9	3,300	7/10 Cl.St., nw.
9:10	965.3	5.3	71	wnw.	4.0	2,153	776.0	−4.5	0.81	74	3.10	nw.	23.4	.....	
						2,000	791.3	−3.3	.....	73	3.39	nw.	22.4	.....	3/10 Cl.St., nw.; 5/10 A.St., nw.
						1,750	816.5	−1.2	.....	70	3.87	nw.	20.7	2,000	
						1,500	842.4	0.8	.....	68	4.40	wnw.	19.0	.....	
						1,250	869.4	2.8	.....	65	4.86	wnw.	17.4	.....	
9:36	965.6	6.0	68	wnw.	3.1	1,228	872.0	3.0	0.49	65	4.93	wnw.	17.2	1,200	
						1,000	896.9	4.1	.....	65	5.32	wnw.	16.5	.....	
						750	924.9	5.3	.....	66	5.88	nw.	15.6	.....	
9:52	965.8	6.0	70	nw.	3.1	737	926.3	5.4	0.18	66	5.92	nw.	15.6	0	
						500	953.7	5.8	.....	69	6.36	nw.	7.0	.....	
10:04	966.0	6.0	70	nw.	3.1	396	966.0	6.0	.....	70	6.54	nw.	3.1	.....	1/10 Cl.St., nw.; 8/10 A.St., nw.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 4, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:23	970.8	0.5	84	ese.	4.5	396	970.8	0.5	.....	84	5.32	ese.	4.5	.....	9/10 Cl.St., nw.: 1/10 A.Cu., nw.
						500	958.6	3.8	.....	69	5.53	sse.	6.5	.....	
7:30	970.7	0.5	84	se.	4.9	626	943.7	7.8	−3.18	51	5.40	ssw.	9.0	.....	
						750	929.3	7.0	.....	53	5.31	ssw.	8.7	0	
7:48	970.7	0.4	85	se.	4.9	1,000	901.5	5.5	.....	56	5.06	s.	8.1	.....	
						1,180	881.7	4.4	0.34	58	4.85	s.	7.6	760	
9:15	971.0	1.6	80	se.	4.0	1,000	901.5	3.9	.....	60	4.85	s.	5.0	660	10/10 Cl.St., nw.
9:33	971.1	2.2	80	se.	2.7	773	926.9	3.3	4.63	62	4.80	ssw.	1.8	.....	
						866	916.7	7.6	−1.16	52	5.43	s.	3.3	.....	
						750	929.3	6.3	.....	55	5.25	s.	4.0	.....	
9:37	971.1	2.2	80	se.	3.1	606	946.3	4.6	−1.14	59	5.00	sse.	4.8	860	
						500	959.3	3.4	.....	70	5.46	se.	3.9	.....	
9:41	971.2	2.2	80	se.	3.1	396	971.2	2.2	.....	80	5.73	se.	3.1	.....	10/10 Cl.St., nw.

December 5, 1918 (No. 1).

A. M.															
7:00	961.1	3.2	78	sw.	2.2	396	961.1	3.2	.....	78	6.00	sw.	2.2	.....	7/10 Cl.St., wnw.; 2/10 A.St., wnw.
						500	949.1	14.8	.....	48	8.08	wsw.	18.1	.....	
7:18	961.1	3.1	81	sw.	2.7	546	943.9	19.9	−11.13	34	7.90	w.	25.1	.....	
						750	921.0	18.6	.....	33	7.07	w.	24.2	.....	
						1,000	894.2	16.9	.....	32	6.16	w.	23.2	.....	
						1,250	868.7	15.3	.....	31	5.39	w.	22.2	.....	
7:28	961.1	3.4	81	sw.	2.7	1,359	857.9	14.6	0.65	30	4.99	w.	21.7	.....	
						1,500	843.5	13.8	.....	30	4.73	w.	21.7	.....	
						1,750	818.5	12.3	.....	30	4.29	w.	21.7	.....	
						2,000	794.4	10.9	.....	30	3.91	w.	21.7	.....	
						2,250	771.3	9.4	.....	30	3.54	w.	21.7	.....	
7:57	961.1	4.0	75	sw.	2.7	2,409	756.7	8.5	0.58	30	3.23	w.	21.7	3,000	
						2,500	747.8	7.8	.....	30	3.17	w.	21.7	.....	6/10 Cl.St., wnw.; 3/10 A.St., wnw.
						2,750	725.2	5.9	.....	30	2.79	w.	21.9	.....	
						3,000	703.7	4.0	.....	31	2.52	wnw.	22.0	4,800	
						3,250	682.4	2.1	.....	31	2.20	wnw.	22.1	.....	
8:32	961.6	5.3	65	w.	4.5	3,398	670.1	1.0	0.77	31	2.04	wnw.	22.2	5,500	
						3,250	682.4	2.2	.....	31	2.22	wnw.	21.8	5,200	5/10 Cl.St., wnw.; 2/10 A.St., wnw.; 2/10 A.Cu., wnw.
						3,000	703.7	4.0	.....	32	2.60	wnw.	21.2	.....	
						2,750	725.2	6.0	.....	32	2.99	w.	20.5	.....	
						2,500	747.8	7.9	.....	33	3.51	w.	19.9	3,700	
9:20	962.4	6.5	61	nw.	5.4	2,409	756.7	7.9	0.55	33	3.51	w.	19.9	.....	
						2,250	771.3	8.8	.....	33	3.74	w.	19.1	.....	
						2,000	795.3	10.1	.....	32	3.96	wnw.	17.8	2,300	9/10 Cl.St., wnw.
9:40	962.8	6.8	58	nw.	7.2	1,772	817.4	11.4	0.77	31	4.18	nw.	16.6	.....	
						1,750	819.8	11.6	.....	31	4.23	nw.	16.5	.....	
						1,500	844.8	13.5	.....	30	4.64	nw.	14.8	.....	
						1,250	870.2	15.4	.....	29	5.08	nnw.	13.2	590	
9:55	963.0	7.4	58	nw.	5.8	1,045	891.3	16.2	− 0.95	28	5.16	nnw.	12.5	.....	
						1,000	896.4	15.8	.....	29	5.21	nnw.	13.2	.....	
						750	923.1	13.4	.....	32	4.92	nnw.	17.1	.....	
10:03	963.2	7.7	57	nw.	5.8	633	936.1	12.3	− 1.69	33	4.72	nnw.	18.9	.....	
						500	951.2	10.1	.....	45	5.56	nnw.	11.3	.....	
10:12	963.3	8.3	55	nnw.	5.4	396	963.3	8.3	.....	55	6.02	nnw.	5.4	.....	5/10 Cl.St., wnw.

December 5, 1918 (No. 2).

A. M.															
10:53	964.1	10.5	50	nw.	4.5	396	964.1	10.5	.....	50	6.35	nw.	4.5	.....	Few Cl., wnw.; 4/10 Cl. St., wnw.
						500	952.2	9.6	.....	50	5.98	nnw.	15.7	.....	
10:55	964.1	10.6	51	nw.	4.5	564	944.7	9.1	0.83	50	5.78	nnw.	22.5	.....	
						750	924.0	11.0	.....	43	5.65	nnw.	20.9	490	
						1,000	896.9	13.5	.....	34	5.26	nnw.	18.8	.....	
11:06	964.2	10.6	49	nw.	5.4	1,089	887.3	14.4	−1.01	31	5.08	nnw.	18.0	.....	
						1,250	870.4	13.4	.....	31	4.76	nnw.	18.1	890	
						1,500	844.3	11.9	.....	30	4.18	nnw.	18.3	.....	
						1,750	820.0	10.4	.....	30	3.78	nw.	18.5	1,600	
						2,000	795.9	8.9	.....	29	3.31	nw.	18.7	.....	3/10 Cl., wnw.; 4/10 Cl.St., wnw.
11:35	964.4	12.2	50	nw.	4.5	2,178	779.0	7.8	0.61	29	3.07	nw.	18.8	2,800	
						2,250	772.0	7.3	.....	29	2.97	nw.	18.6	.....	
						2,500	748.8	5.6	.....	31	2.82	nw.	18.0	3,000	
						2,750	726.4	3.8	.....	32	2.57	wnw.	17.4	.....	
P. M.															
12:08	964.6	13.9	46	nnw.	6.3	3,001	703.9	2.1	0.66	33	2.35	wnw.	16.8	3,500	
						2,750	726.4	3.6	.....	33	2.61	wnw.	19.0	.....	
						2,500	748.8	5.2	.....	34	3.01	nw.	21.1	.....	2/10 Cl. wnw.; 4/10 Cl.St., wnw; few Cl.Cu., wnw.
12:47	965.0	13.8	48	n.	6.3	2,286	768.5	6.5	0.17	34	3.29	nw.	23.0	2,300	
						2,250	772.0	6.6	.....	34	3.32	nw.	23.1	.....	
						2,000	795.9	7.0	.....	35	3.51	nnw.	23.9	.....	
1:07	965.3	13.6	48	nnw.	7.2	1,745	821.0	7.4	0.67	35	3.60	nnw.	24.7	1,100	
						1,500	845.2	9.0	.....	33	3.79	nnw.	22.7	.....	
						1,250	871.7	10.7	.....	31	3.99	nnw.	20.7	490	
						1,000	898.7	12.4	.....	29	4.18	nnw.	18.7	.....	
1:27	965.6	13.5	49	nnw.	4.9	951	903.6	12.7	−1.31	29	4.26	nnw.	18.3	.....	
1:34	965.8	13.6	47	nnw.	5.4	790	921.4	10.6	0.81	36	4.60	nnw.	17.2	.....	
						750	926.0	10.9	.....	37	4.82	nnw.	15.9	0	
						500	954.0	13.0	.....	47	7.04	nnw.	8.1	.....	
1:41	965.9	13.8	51	nnw.	4.9	396	965.9	13.8	.....	51	8.05	nnw.	4.9	.....	Few Cl., wnw.; 2/10 Cl.St., wnw.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 5, 1918 (No. 3).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.			
P. M.	*mb.*	°*C.*	%		*m. p. s*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*		
2:24	966.6	15.1	45	nnw.	7.6	396	966.6	15.1	.....	45	7.72	nnw.	7.6	.....		Few Ci., wnw.; 2/10 Ci.St., wnw.
						500	954.7	14.0	.....	44	7.03	nnw.	9.2	.....		
						750	926.7	11.4	.....	40	5.39	nw.	13.2	.....		
2:31	966.7	15.0	43	nnw.	6.7	769	924.7	11.2	1.05	40	5.32	nw.	13.5	0		
						1,000	899.0	9.4	.....	39	4.60	nw.	17.1	.....		
						1,250	872.7	7.5	.....	37	3.84	nw.	21.0	760		
2:51	967.0	15.2	38	nnw.	6.3	1,314	846.1	7.0	0.77	37	3.71	nw.	22.0	.....		
						1,500	846.8	6.8	.....	31	3.06	nw.	24.0	1,000		
						1,750	821.5	6.6	.....	24	2.34	nw.	26.5	1,500		1/10 Ci., wnw.; 2/10 Ci. St., wnw.
3:08	967.4	15.0	42	nnw.	6.3	1,758	820.8	6.6	0.06	24	2.34	nw.	26.6	.....		
						1,750	821.5	6.6	.....	24	2.34	nw.	26.5	.....		
						1,500	847.8	6.7	.....	31	3.04	nw.	22.3	.....		
						1,250	874.0	6.8	.....	38	3.75	nw.	17.7	.....		
3:38	968.1	14.7	42	nnw.	4.9	1,242	874.7	6.8	1.01	38	3.75	nw.	17.6	620		
						1,000	900.9	9.2	.....	38	4.42	nw.	17.4	.....		
						750	928.4	11.8	.....	37	5.12	nnw.	17.2	0		
3:53	968.4	14.2	41	nnw.	7.2	725	931.2	12.0	0.55	37	5.19	nnw.	17.2	.....		
						500	956.7	13.2	.....	40	6.07	nnw.	9.4	.....		
3:56	968.5	13.8	42	nnw.	5.8	396	968.5	13.8	.....	42	6.63	nnw.	5.8	.....		5/10 Ci.St., wnw.

December 6, 1918.

A. M.																
7:16	975.2	−2.8	96	se.	2.7	396	975.2	−2.8	.....	96	4.65	se.	2.7	.....		10/10 Ci.St., wnw.
						500	962.8	0.2	.....	68	4.22	se.	11.1	.....		
7:18	975.2	−2.8	96	se.	2.7	537	958.3	1.3	−2.91	58	3.89	se.	14.1	.....		
						750	933.0	2.2	.....	52	3.72	se.	12.9	260		
						1,000	904.8	3.3	.....	45	3.48	sse.	11.4	.....		
						1,250	877.5	4.4	.....	38	3.18	s.	9.9	810		
7:50	975.0	−3.0	96	sse.	2.7	1,411	860.2	5.1	−0.45	33	2.90	s.	9.0	.....		10/10 Ci.St., wnw.
						1,500	851.2	5.2	.....	31	2.74	ssw.	10.8	1,320		
8:04	975.0	−2.7	96	se.	3.6	1,742	826.0	5.4	−0.09	25	2.24	sw.	15.6	.....		
						1,750	825.2	5.3	.....	25	2.23	sw.	15.6	.....		
						2,000	800.0	3.5	.....	31	2.43	sw.	15.6	.....		
						2,250	775.8	1.6	.....	37	2.54	sw.	15.7	.....		
8:14	974.9	−2.6	96	se.	3.6	2,394	762.1	0.5	0.75	39	2.47	sw.	15.7	3,400		Faint solar halo, 22° radius, from 8:20 to 10:22 a. m.
						2,500	752.3	0.2	.....	40	2.49	sw.	16.1	.....		
						2,750	729.0	−0.4	.....	43	2.54	wsw.	17.1	4,300		
8:35	974.8	−2.0	96	se.	3.6	2,990	707.2	−1.0	0.25	46	2.59	w.	18.1	5,000		7/10 Ci.St., wnw.; 3/10 A.St., wnw.
						3,000	706.3	−1.1	.....	46	2.56	w.	18.1	.....		Solar halo, 46° radius, from 8:46 to 8:50 a. m.
						3,250	684.1	−2.6	.....	45	2.21	w.	18.5	.....		
						3,500	662.7	−4.0	.....	45	1.97	w.	19.0	.....		
						3,750	642.1	−5.5	.....	44	1.69	w.	19.4	.....		
9:08	974.7	−1.2	92	sse.	5.4	3,947	626.7	−6.7	0.62	44	1.53	w.	19.7	8,000		
						3,750	642.1	−5.4	.....	44	1.71	w.	19.6	.....		
						3,500	662.7	−3.8	.....	43	1.91	w.	19.5	.....		
						3,250	684.1	−2.2	.....	43	2.19	wsw.	19.3	5,000		
9:42	974.7	−0.8	92	sse.	6.7	3,003	706.1	−0.6	0.48	42	2.44	wsw.	19.2	.....		
						2,750	729.0	0.6	.....	43	2.74	wsw.	18.4	3,500		
						2,500	752.3	1.8	.....	44	3.03	sw.	17.7	.....		
						2,250	775.8	3.0	.....	45	3.41	sw.	16.9	.....		
10:04	974.7	−0.6	92	s.	6.3	2,134	786.7	3.6	0.70	46	3.64	sw.	16.6	.....		4/10 Ci.St., wnw.; 5/10 A.St., wnw.; 1/10 A.Cu., w.
						2,000	799.5	4.5	.....	42	3.54	sw.	18.0	1,800		
						1,750	824.4	6.3	.....	36	3.44	ssw.	20.6	.....		
10:14	974.5	−0.5	88	s.	5.8	1,720	827.2	6.5	−0.24	35	3.39	ssw.	20.9	.....		
						1,500	850.3	6.0	.....	34	3.18	ssw.	17.8	.....		
10:27	974.4	−0.4	89	s.	5.4	1,262	874.9	5.4	−1.35	33	2.96	ssw.	14.4	640		
						1,250	876.5	5.2	.....	34	3.01	ssw.	14.5	.....		
						1,000	903.8	2.1	.....	45	3.20	s.	16.1	.....		
						750	932.0	−1.0	.....	57	3.20	sse.	17.8	0		
10:43	974.2	−0.1	91	s.	5.4	636	945.3	−2.4	1.00	62	3.10	sse.	18.5	.....		
						500	961.7	−1.0	.....	77	4.33	s.	11.6	.....		
10:48	974.2	0.0	89	s.	6.3	396	974.2	0.0	.....	89	5.44	s.	6.3	.....		8/10 Ci.St., wnw.; 1/10 A.St., wnw.; 1/10 A.Cu., w.

December 7, 1918.

A. M.																
7:49	960.4	1.4	96	sw.	4.5	396	960.4	1.4	.....	96	6.49	sw.	4.5	.....		3/10 Ci.St., w.; 4/10 Ci.Cu., w.; 2/10 A.St., w.
						500	948.9	12.3	.....	60	5.59	sw.	9.4	.....		
7:50	960.4	1.4	96	sw.	4.5	554	942.2	17.9	−10.44	41	8.41	sw.	11.9	.....		
						750	920.8	16.9	.....	38	7.32	sw.	12.7	0		
						1,000	894.0	15.5	.....	34	5.90	wsw.	13.7	.....		
						1,250	868.3	14.2	.....	30	4.86	w.	14.7	620		
8:13	960.4	1.6	96	sw.	4.0	1,365	856.2	13.6	0.53	28	4.36	w.	15.2	.....		
						1,500	843.0	12.9	.....	28	4.17	w.	15.4	.....		3/10 Ci.St., w.; 3/10 Ci.Cu., w.; 2/10 A.St., w.
						1,750	818.4	11.6	.....	27	3.69	w.	15.9	1,300		
						2,000	794.2	10.3	.....	27	3.38	wsw.	16.4	1,500		
						2,250	770.5	9.0	.....	26	2.98	wsw.	16.8	.....		
8:38	960.4	2.1	92	sw.	4.5	2,308	764.5	8.2	0.52	26	2.83	wsw.	17.1	.....		
						2,500	747.3	6.9	.....	26	2.59	wsw.	18.7	.....		
						2,750	725.0	5.1	.....	27	2.37	wsw.	20.7	.....		
						3,000	703.4	3.4	.....	28	2.18	w.	22.8	2,400		
						3,250	682.8	1.7	.....	28	1.93	w.	24.9	.....		2/10 Ci.St., w.; 2/10 A.St., w.
9:10	960.5	2.4	91	sw.	5.8	3,473	663.1	0.1	0.71	29	1.78	w.	26.7	4,000		
						3,250	682.8	1.7	.....	29	2.00	w.	24.4	.....		
						3,000	703.4	3.5	.....	29	2.28	w.	21.9	.....		
9:32	960.6	2.6	91	sw.	4.0	2,858	715.6	4.5	0.82	29	2.44	w.	20.4	.....		
						2,750	725.0	5.4	.....	29	2.60	w.	19.7	2,700		
						2,500	747.3	7.4	.....	28	2.88	w.	18.0	.....		
						2,250	770.5	9.5	.....	27	3.20	w.	16.4	1,700		
						2,000	794.2	11.5	.....	27	3.66	w.	14.7	.....		3/10 Ci.St., w.; 2/10 A.St., w.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 7, 1918—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
10:04	960.8	3.1	88	sw.	6.7	1,786	814.6	13.3	0.31	26	3.97	w.	13.3		
						1,750	818.4	13.4		26	4.00	w.	13.4	920	Solar halo, 22° radius began 10:17 a. m.; solar halo, 46° radius began 10:28 a. m.; both halos continued at end of flight.
						1,500	843.0	14.2		27	4.37	w.	13.9		
						1,250	868.3	14.9		27	4.57	w.	14.5	0	
						1,000	894.0	15.7		28	5.00	wsw.	15.1		
						750	920.8	16.5		29	5.44	wsw.	15.6		
10:30	960.8	3.6	88	sw.	6.7	673	929.2	16.7	−4.73	29	5.51	wsw.	15.8		
						500	949.0	8.5		66	7.33	wsw.	9.9		
10:43	960.8	3.6	88	sw.	6.3	396	960.8	3.6		88	6.96	sw.	6.3		5/10 Cl.St., w.; 3/10 A.St., w.

December 8, 1918.

A. M.															
6:31	962.5	6.0	87	ene.	5.4	396	962.5	6.0		87	8.13	ene.	5.4		2/10 Ci.St., w.; 6/10 A.Cu., wsw.
						500	950.6	12.2		56	7.96	ene.	12.1		
6:52	962.5	6.0	87	ene.	5.4	555	944.3	15.5	−5.97	40	7.04	ene.	15.6		
						750	922.8	44.8		36	6.06	e.	13.9		
						1,000	896.0	13.9		31	4.92	e.	11.7		
7:21	962.6	7.2	78	e.	5.4	1,254	869.3	13.0	0.36	26	3.89	ese.	9.5	0	
						1,500	844.2	11.1		27	3.57	ese.	7.6	730	Light smoke during remainder of flight.
7:42	962.7	5.9	87	ese.	5.4	1,752	819.0	9.1	0.78	28	3.24	ese.	5.7	980	1/10 Cl.St., w.; 2/10 A.Cu., wsw.
						2,000	794.3	7.8		29	3.07	ese.	5.7		
						2,250	770.3	6.4		30	2.88	ese.	5.7	1,900	
						2,500	747.3	5.1		31	2.72	se.	5.6	1,800	
						2,750	725.0	3.7		32	2.55	se.	5.6		
9:29	962.9	8.1	76	ese.	4.0	2,900	711.9	2.9	0.54	32	2.41	se.	5.6		
						3,000	703.4	2.5		36	2.63	se.	5.7		
						3,250	682.2	1.6		47	3.22	sse.	5.9		
						3,500	661.6	0.7		58	3.73	sse.	6.1	3,500	
10:13	962.9	8.9	79	ese.	8.0	3,521	659.4	0.6	0.50	59	3.76	sse.	6.1	3,000	Few A.Cu., wsw.
						3,500	661.6	0.7		59	3.79	sse.	6.1		
						3,250	682.2	2.3		54	3.89	sse.	6.7	2,500	
						3,000	703.4	3.8		50	4.01	sse.	7.2		
						2,750	725.0	5.4		45	4.04	se.	7.7		
						2,500	747.3	6.9		41	4.08	se.	8.2	1,800	
10:43	962.4	10.1	78	ese.	6.3	2,277	767.6	8.3	0.16	37	4.05	se.	8.7		
						2,250	770.3	8.3		37	4.05	se.	9.0		
						2,000	794.3	8.7		36	4.05	se.	11.9		
						1,750	819.0	9.1		35	4.05	ese.	14.7		
10:53	962.2	10.6	76	ese.	6.7	1,532	839.9	9.5	0.52	34	4.04	ese.	17.2	1,200	
						1,500	843.8	9.7		34	4.09	ese.	17.3		
						1,250	869.3	11.0		32	4.20	ese.	18.2		
						1,000	895.3	12.2		31	4.41	ese.	19.1	330	
11:08	962.0	11.4	70	ese.	8.0	795	917.1	13.3	−1.35	30	4.58	ese.	19.8		
						750	922.2	12.7		33	4.85	ese.	19.5		
11:17	961.8	12.0	69	ese.	8.0	572	941.7	10.3	1.19	47	5.89	ese.	18.3	0	
						500	950.1	11.2		56	7.45	ese.	9.9		
11:20	961.9	12.4	70	ese.	9.4	396	961.9	12.4		70	10.08	ese.	9.4		Few A., Cu., wsw.

December 9, 1918.

A. M.															
10:29	950.2	6.7	94	wsw.	8.5	396	950.2	6.7		94	9.22	wsw.	8.5		3/10 St.Cu., wsw.; 7/10 St., wsw.
						500	938.0	5.8		95	8.76	wsw.	9.5		
						750	910.0	3.7		99	7.88	wsw.	11.7		
10:35	950.3	6.6	91	wsw.	7.6	810	903.3	3.2	0.85	100	7.69	wsw.	12.3	0	Altitude of St. base about 750 m.
						1,000	882.0	2.3		100	7.21	wsw.	14.5	950	
						1,250	855.4	1.1		99	6.55	wsw.	17.5	1,200	
						1,500	829.5	−0.1		99	6.00	wsw.	20.4		2/10 St.Cu., wsw.; 8/10 St., wsw.
11:17	950.6	6.0	92	wsw.	8.5	1,503	820.0	−0.6	0.48	99	5.75	wsw.	21.5		
						1,750	804.0	−0.6		92	5.35	wsw.	21.6	5,000	
						2,000	779.2	−0.5		82	4.81	w.	21.6	6,500	
						2,250	755.1	−0.5		71	4.16	wnw.	21.7		
11:40	950.6	6.4	87	wsw.	8.5	2,437	737.7	−0.4	−0.02	63	3.72	wnw.	21.8		
						2,500	731.8	−0.8		62	3.54	wnw.	21.7		
						2,750	708.7	−2.3		57	2.87	wnw.	21.5	7,500	
						3,000	686.9	−3.9		52	2.29	w.	21.3	8,000	
						3,250	665.8	−5.4		47	1.82	w.	21.0		
12:00	950.6	6.4	86	w.	8.5	3,355	657.1	−6.1	0.74	45	1.64	w.	21.0		10/10 St. Cu., wsw.
NOON.															
						3,250	665.8	−5.2		44	1.73	w.	20.9		
						3,000	687.2	−3.1		41	1.93	wnw.	20.7		
P. M.															
12:17	950.7	6.3	87	w.	8.0	2,953	691.6	−2.7	0.47	41	2.00	wnw.	20.7		
12:30	950.8	6.2	87	w.	8.0	2,750	709.2	−1.7		43	2.28	wnw.	20.4	5,500	
						2,530	729.5	−0.7	0.20	45	2.59	wnw.	20.0		
						2,500	732.1	−0.6		47	2.73	wnw.	20.0		
						2,250	755.1	−0.1		60	3.64	wnw.	19.9	5,500	
						2,000	779.2	0.4		74	4.65	wnw.	19.8		
						1,750	804.0	0.9		88	5.74	wnw.	19.8		
12:53	951.0	6.1	88	wsw.	9.4	1,582	821.3	1.2	−0.02	97	6.46	wnw.	19.7	3,300	
						1,500	829.5	1.0		98	6.44	wnw.	18.7		
						1,250	855.4	0.5		100	6.33	w.	15.7	1,040	
1:05	951.0	6.0	90	w.	8.9	1,217	859.4	0.4	0.58	100	6.29	w.	15.3		
						1,000	882.2	1.6		98	6.72	w.	14.5		
						750	910.2	3.1		97	7.40	w.	13.7	0	Altitude of St.Cu. base about 750 m.
1:22	951.2	6.0	89	w.	8.9	645	922.7	3.7	0.92	96	7.64	w.	13.3		
						500	938.8	5.0		93	8.11	w.	11.0		
1:29	951.3	6.0	88	w.	9.4	396	951.3	6.0		88	8.23	w.	9.4		10/10 St. Cu., wsw.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 10, 1918, series (No. 1).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
7:41	963.3	0.4	89	nw.	5.8	396	963.3	0.4	.....	89	5.60	nw.	5.8	.....	Few Cl., sw.; 3/10 St.Cu., wnw.; 4/10 St., nw.
						500	950.8	− 0.3	.....	93	5.54	nw.	9.1	.....	
7:49	963.4	0.3	88	nw.	4.9	676	930.2	− 1.5	0.68	100	5.39	nw.	14.8	0	
						750	921.5	− 1.6	.....	98	5.24	nw.	14.0	.....	Altitude of St. base about 1,400 m.
						1,000	893.3	− 2.2	.....	92	4.68	nw.	11.4	.....	
8:05	963.6	0.2	89	nw.	5.4	1,102	881.8	− 2.4	0.21	90	4.50	nw.	10.3	860	
						1,250	865.8	− 2.9	.....	91	4.37	nw.	11.0	.....	1/10 Cl.St., sw.; 8/10 St.Cu., wnw.
						1,500	839.0	− 3.7	.....	93	4.17	nw.	12.2	.....	
						1,750	813.0	− 4.5	.....	95	3.98	wnw.	13.3	2,800	
						2,000	787.7	− 5.3	.....	97	3.79	wnw.	14.5	2,800	Altitude of St.Cu. base about 2,400 m.
						2,250	762.8	− 6.1	.....	99	3.61	wnw.	15.6	.....	
8:47	964.0	1.2	89	nw.	3.6	2,324	755.8	− 6.3	0.31	100	3.59	wnw.	16.0	.....	
9:00	964.2	1.8	84	nw.	4.0	2,400	748.8	− 4.4	−2.51	87	3.67	wnw.	16.8	3,300	
						2,500	739.1	− 4.8	.....	84	3.43	wnw.	16.9	.....	
						2,750	715.9	− 6.0	.....	78	2.87	wnw.	17.3	.....	
						3,000	693.5	− 7.1	.....	71	2.38	w.	17.6	.....	
						3,250	672.0	− 8.2	.....	65	1.98	w.	18.0	.....	8/10 St.Cu., wnw.; 2/10 St., nw.
9:18	964.7	2.0	85	nw.	4.8	3,280	669.2	− 8.3	0.44	64	1.93	w.	18.0	.....	
						3,500	651.0	− 9.3	.....	61	1.68	w.	17.6	6,700	
						3,750	630.8	−10.4	.....	58	1.46	w.	17.2	7,800	
						4,000	610.8	−11.4	.....	56	1.28	w.	16.7	9,100	
10:10	965.9	2.1	86	nw.	6.3	4,122	601.1	−12.1	0.49	54	1.16	w.	16.5	.....	
						4,000	611.2	−11.5	.....	56	1.27	w.	16.1	.....	
						3,750	631.3	−10.1	.....	60	1.54	wnw.	15.3	7,500	
						3,500	652.0	− 8.8	.....	64	1.85	wnw.	14.5	2,300	
10:39	966.1	2.3	86	nw.	6.3	3,440	657.0	− 8.5	0.23	65	1.92	wnw.	14.3	.....	Altitude of St.Cu. base about 2,200 m.
						3,250	673.3	− 8.1	.....	72	2.21	wnw.	13.7	.....	
						3,000	695.1	− 7.5	.....	81	2.62	wnw.	12.9	.....	
						2,750	717.9	− 6.9	.....	90	3.07	wnw.	12.1	.....	
10:47	966.1	2.4	86	nw.	6.3	2,542	737.2	− 6.4	0.52	98	3.49	wnw.	11.4	.....	
						2,500	741.3	− 6.2	.....	95	3.44	wnw.	11.6	.....	
						2,250	765.4	− 4.9	.....	96	3.89	wnw.	12.5	.....	
						2,000	790.0	− 3.6	.....	94	4.25	nw.	13.5	2,500	
11:12	966.3	2.6	82	nw.	6.7	1,795	810.5	− 2.5	−0.10	92	4.56	nw.	14.3	.....	
						1,750	815.3	− 2.5	.....	91	4.51	nw.	14.3	2,100	
						1,500	841.4	− 2.8	.....	87	4.21	nw.	14.1	.....	
						1,250	868.3	− 3.1	.....	83	3.91	nw.	14.0	.....	
11:34	966.4	2.9	79	nw.	6.3	1,217	871.9	− 3.1	−0.05	82	3.86	nw.	14.0	950	
11:38	966.4	3.1	80	nw.	6.7	1,005	895.6	− 3.2	0.89	99	4.63	nw.	13.2	.....	
						750	924.1	− 0.9	.....	88	4.99	nw.	10.2	0	
11:48	966.4	3.2	81	nw.	6.3	669	934.1	− 0.2	1.28	85	5.11	nw.	9.3	.....	
						500	953.9	2.0	.....	82	4.24	nw.	8.5	.....	
11:52	966.5	3.3	80	nw.	8.0	396	966.5	3.3	.....	80	3.71	nw.	8.0	.....	6/10 St.Cu., wnw.; 4/10 St., nw.

December 10, 1918, series (No. 2).

P. M.															
12:44	966.3	4.6	76	nw.	6.3	396	966.3	4.6	.....	76	6.44	nw.	6.3	.....	6/10 St.Cu., nw. (upper layer); 4/10 St.Cu., nw. (lower layer).
						500	953.8	3.4	.....	79	6.16	nw.	9.2	.....	
12:52	966.2	4.4	74	nw.	6.7	748	925.1	0.7	1.11	86	5.53	nw.	16.0	0	Altitude of St. Cu. base (lower) about 1,150 m.
						1,000	896.7	− 0.9	.....	90	5.10	nw.	18.3	.....	
						1,220	869.2	− 2.9	.....	93	4.46	nw.	20.6	860	
1:07	966.2	5.0	75	nw.	8.5	1,503	841.5	− 4.8	0.73	97	3.96	nw.	23.2	.....	
1:12	966.2	4.8	73	nw.	6.7	1,689	821.9	− 3.4	−0.75	81	3.73	nw.	25.9	3,500	
						1,750	815.5	− 3.6	.....	83	3.76	nw.	23.7	.....	
1:28	966.2	4.7	75	nw.	8.0	1,982	791.8	− 4.6	0.41	93	3.86	nw.	15.4	.....	Few Cl., nsw.; 1/10 A.Cu., nw.; 7/10 St. Cu., nw.
						2,000	790.2	− 5.0	.....	87	3.49	nw.	15.4	3,500	
						2,220	765.7	− 5.2	.....	84	3.31	nw.	15.6	.....	
						2,500	741.4	− 5.9	.....	76	2.82	nw.	15.9	3,700	
1:47	966.2	5.1	72	nw.	9.4	2,636	728.5	− 6.2	0.24	71	2.86	nw.	16.0	.....	
						2,750	718.0	− 6.7	.....	72	2.50	nw.	16.4	4,800	
						3,000	695.3	− 7.8	.....	74	2.40	nw.	17.4	5,300	
						3,250	673.7	− 8.8	.....	76	2.20	nw.	18.4	4,200	
						3,500	652.4	− 9.9	.....	78	2.04	nw.	19.3	.....	10/10 St. Cu., nw.
2:09	966.3	5.2	74	nw.	8.5	3,550	648.1	−10.1	0.40	78	2.00	nw.	19.5	.....	
						3,500	652.4	− 9.9	.....	77	2.02	nw.	19.3	.....	
						3,250	674.1	− 8.9	.....	74	2.12	nw.	18.2	.....	
						3,000	696.0	− 8.0	.....	70	2.17	nw.	17.1	.....	
2:33	966.6	5.0	72	nw.	8.0	2,771	717.0	− 7.1	0.43	67	2.24	nw.	16.1	3,000	
						2,750	718.9	− 7.0	.....	67	2.26	nw.	16.2	.....	
						2,500	741.8	− 5.9	.....	64	2.37	nw.	17.2	.....	
						2,220	765.7	− 4.9	.....	60	2.43	nw.	18.3	2,000	
						2,000	790.8	− 3.8	.....	57	2.53	nw.	19.3	.....	Few Cl., nsw.; 9/10 St.Cu., nw.
						1,750	816.9	− 2.7	.....	54	2.64	nw.	20.4	.....	
3:07	967.0	5.1	77	nw.	7.6	1,676	824.3	− 2.4	−0.72	53	2.65	nw.	20.7	1,700	
						1,500	843.0	− 3.7	.....	88	3.94	nw.	20.1	.....	
3:12	967.0	5.4	75	nw.	5.4	1,454	847.7	− 4.0	0.84	97	4.24	nw.	19.9	.....	
						1,220	869.8	− 2.3	.....	91	4.59	nw.	17.7	0	Altitude of St.Cu. base about 1,150 m.
						1,000	897.7	− 0.2	.....	83	4.99	nw.	15.1	.....	
3:34	967.3	5.2	75	nw.	5.8	759	925.1	1.8	0.99	75	5.22	nw.	12.5	.....	
						750	926.2	1.9	.....	75	5.26	nw.	12.4	.....	
						500	955.2	4.4	.....	76	6.36	nw.	8.7	.....	
3:39	967.4	5.4	77	nw.	7.2	396	967.4	5.4	.....	77	6.91	nw.	7.2	.....	Few Cl., nsw.; 2/10 St.Cu., nw.

December 10, 1918, series (No. 3).

P. M.															
4:15	967.8	5.4	69	nnw.	4.5	396	967.8	5.4	.....	69	6.19	nnw.	4.5	.....	Few Cl., nsw.; few St. Cu., nw.
						500	955.4	4.4	.....	71	5.94	nnw.	6.5	.....	
4:31	967.9	5.4	69	nw.	4.0	731	928.8	2.3	0.93	77	5.55	nw.	11.1	0	
						750	927.1	2.1	.....	77	5.47	nw.	11.3	.....	
						1,000	898.6	−0.1	.....	78	4.73	nw.	14.4	.....	

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 10, 1918, series (No. 3)—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
4:42	968.0	5.0	74	nw.	4.9	1,225	873.5	−2.1	0.89	79	4.05	nw.	17.2	810	
						1,250	871.0	−2.2		77	3.92	nw.	17.4		
						1,500	843.7	−3.4		59	2.71	nw.	19.2		
4:54	968.1	5.0	69	nw.	4.9	1,741	818.3	−4.6	0.48	42	1.74	nw.	21.0	1,700	
						1,750	817.4	−4.5		42	1.76	nw.	21.1		
4:58	968.2	4.9	70	nw.	4.0	1,905	801.5	−3.4	−0.73	37	1.70	nw.	22.6		
						2,000	792.0	−3.9		37	1.63	nw.	21.7		
						2,250	767.2	−5.4		38	1.47	nw.	19.4	2,200	
						2,500	743.0	−6.8		38	1.31	nw.	17.0	2,800	Few A.Cu., sw.
5:24	968.4	3.8	74	nw.	4.9	2,553	738.1	−7.1	0.44	38	1.27	nw.	16.5		
						2,750	719.8	−7.7		55	1.75	nw.	15.5	3,100	
5:54	968.6	3.2	65	nw.	4.9	2,924	703.8	−8.3	0.48	70	2.11	nw.	14.7		
						2,750	719.8	−7.5		63	2.03	nw.	16.1	3,300	
						2,500	743.0	−6.3		53	1.90	nw.	18.0		
6:20	968.8	2.4	63	nw.	5.4	2,273	764.8	−5.2	0.36	44	1.73	nw.	19.8	2,200	
						2,250	767.2	−5.1		44	1.75	nw.	19.8		
						2,000	792.0	−4.2		40	1.72	nw.	19.9		
						1,750	818.0	−3.3		36	1.67	nw.	20.0		
6:47	969.1	2.0	64	nw.	4.9	1,545	839.1	−2.6	0.27	33	1.62	nw.	20.1	860	
						1,500	844.3	−2.5		35	1.74	nw.	20.3		
						1,250	871.0	−1.8		47	2.47	nw.	21.3		
7:02	969.2	1.9	65	nw.	4.5	1,103	887.1	−1.4	−0.22	54	2.94	nw.	21.9	0	
						1,100	898.6	−1.6		54	2.89	nw.	21.8		
7:13	969.3	1.6	63	nw.	4.5	747	927.6	−2.2	1.20	51	2.75	nw.	21.5		
						500	956.8	0.8		64	4.14	nw.	9.8		
7:20	969.3	2.0	69	nw.	4.9	396	969.3	2.0		69	4.87	nw.	4.9		Cloudless.

December 10, 1918, series (No. 4).

P. M.															
7:34	969.6	1.5	62	nw.	4.9	396	969.6	1.5		62	4.22	nw.	4.9		Cloudless.
7:58	969.6	1.5	62	nw.	4.9	479	959.8	2.9	−1.69	57	4.29	nw.	18.6		
						500	957.5	2.8		57	4.26	nw.	18.9		
						750	929.0	1.2		55	3.66	nw.	22.3	0	
						1,000	900.0	−0.4		53	3.13	nw.	25.6		
8:15	969.6	1.4	60	nw.	4.9	1,182	879.2	−1.5	0.63	51	2.75	nw.	28.1	620	
						1,200	871.9	−1.9		50	2.61	nw.	27.6		
						1,500	841.5	−3.5		47	2.14	nw.	25.6	1,100	
8:30	969.6	1.1	62	nw.	4.9	1,697	823.8	−4.8	0.64	44	1.80	nw.	24.1		
						1,750	818.2	−5.0		43	1.72	nw.	24.0		
						2,000	792.8	−6.0		40	1.47	nw.	23.6		
						2,250	768.0	−7.3		37	1.22	nw.	23.1	2,000	
8:44	969.6	1.1	62	nw.	5.4	2,323	760.6	−7.6	−0.17	36	1.16	nw.	23.0		
						2,250	768.0	−8.2		37	1.12	nw.	21.2	2,000	
9:37	969.6	0.0	71	w.	5.8	2,170	775.8	−8.8	0.84	38	1.10	nw.	19.3	2,100	
						2,000	792.8	−7.4		42	1.37	nw.	19.3		
						1,750	818.2	−5.3		48	1.88	nw.	19.3		
9:57	969.6	0.0	70	w.	6.3	1,667	827.5	−4.6	0.79	50	2.08	nw.	19.3	1,300	
						1,500	844.5	−3.3		48	2.23	nw.	18.5		
						1,250	871.9	−1.3		46	2.52	nw.	17.2	560	
						1,000	900.0	0.7		43	2.76	nw.	16.0		
10:15	969.7	−0.1	69	w.	5.8	984	901.6	0.8	0.57	43	2.78	nw.	15.9		
						750	929.0	2.1		43	3.06	wnw.	15.8	0	
10:28	969.7	−0.1	68	w.	4.9	513	955.8	3.5	−3.08	43	3.38	w.	15.8		
						500	957.5	3.1		46	3.51	w.	14.6		
10:30	969.8	−0.1	69	w.	4.9	396	969.8	−0.1		69	4.18	w.	4.9		Cloudless.

December 11, 1918, series (No. 5).

A. M.															
12:08	970.3	−0.4	63	sw.	4.9	396	970.3	− 0.4		63	3.72	sw.	4.9		Cloudless.
						500	957.9	1.5		69	4.70	sw.	10.5		
12:10	970.3	−0.4	63	sw.	4.9	555	951.3	2.5	−1.83	73	5.34	wsw.	13.5		
						750	928.7	2.4		61	4.43	wnw.	13.1		
12:20	970.3	−0.9	71	wsw.	4.0	757	927.6	2.4	0.05	61	4.43	wnw.	13.1	0	
						1,000	900.0	− 0.1		61	3.70	wnw.	12.8		
						1,250	872.3	− 1.7		61	3.23	nw.	12.7	1,010	
12:39	970.3	−1.1	73	wsw.	5.8	1,308	866.1	− 2.2	0.84	61	3.10	nw.	12.6		
						1,500	845.5	− 3.7		61	2.73	nw.	14.5		
						1,750	819.0	− 5.7		60	2.27	wnw.	17.0	1,700	
						2,000	793.2	− 7.8		60	1.89	wnw.	19.5		
1:01	970.3	−1.2	71	wsw.	4.9	2,117	781.2	− 8.7	0.80	60	1.75	wnw.	20.7	3,200	
						2,250	767.8	− 9.1		58	1.63	wnw.	20.6		
						2,500	743.0	− 9.9		55	1.44	wnw.	20.5		
						2,750	719.7	−10.6		52	1.28	wnw.	20.3	4,800	
						3,000	697.0	−11.4		49	1.12	wnw.	20.2	6,000	
1:51	970.3	−1.0	74	w.	4.9	3,242	675.0	−12.4	0.34	46	0.96	wnw.	20.0	5,900	
						3,000	697.0	−11.5		48	1.09	wnw.	22.1		
						2,750	719.7	−10.6		50	1.23	wnw.	24.4		
2:26	970.4	−1.0	76	w.	4.5	2,586	735.3	−10.0	0.52	52	1.35	wnw.	25.8	4,300	
						2,500	743.0	− 9.6		53	1.43	wnw.	25.1		
						2,250	767.8	− 8.3		57	1.72	wnw.	23.1	3,500	
						2,000	793.2	− 7.0		60	2.03	wnw.	21.0		
						1,750	819.0	− 5.7		64	2.42	wnw.	19.0	1,500	
3:04	970.6	−1.6	83	wsw.	4.9	1,529	842.3	− 4.6	0.93	67	2.78	wnw.	17.2		
						1,500	845.6	− 4.3		67	2.85	wnw.	17.3		
						1,250	873.0	− 2.0		65	3.36	wnw.	17.8	520	
						1,000	900.7	0.3		64	3.99	wnw.	18.4		
3:22	970.7	−1.4	84	wsw.	4.9	874	914.6	1.5	−0.12	63	4.29	wnw.	18.7		
						750	929.0	1.4		65	4.39	w.	17.2	0	
3:32	970.8	−1.4	84	wsw.	5.8	624	943.4	1.2	−1.14	67	4.46	wsw.	15.6		
						500	958.6	− 0.2		76	4.57	wsw.	11.7		
3:33	970.8	−1.4	84	wsw.	5.8	396	970.8	− 1.4		84	4.57	wsw.	8.4		Cloudless.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 11, 1918, series (No. 6).

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
4:34	970.9	−1.2	76	w.	4.9	396	970.9	− 1.2	.....	76	4.20	w.	4.9	.....	Cloudless.
						500	958.5	− 0.4	.....	73	4.31	w.	9.6	.....	
4:40	970.9	−1.1	76	wsw.	4.9	700	934.8	1.0	−0.72	67	4.40	wnw.	18.5	0	
						750	929.0	0.6	.....	67	4.27	wnw.	18.7	.....	
						1,000	900.7	− 1.4	.....	65	3.54	wnw.	19.4	600	
						1,250	872.7	− 3.4	.....	63	2.90	wnw.	20.2	.....	
5:03	970.9	−1.7	84	wsw.	4.5	1,404	855.5	− 4.6	0.80	62	2.57	wnw.	20.7	.....	
						1,500	845.4	− 5.2	.....	64	2.52	wnw.	20.9	.....	
						1,750	818.7	− 6.8	.....	68	2.34	wnw.	21.5	2,600	
5:20	971.0	−1.5	84	wsw.	5.8	1,910	802.1	− 7.8	0.63	71	2.24	wnw.	21.8	.....	
						2,000	793.0	− 8.1	.....	69	2.12	wnw.	22.0	.....	
						2,250	768.0	− 8.9	.....	65	1.86	wnw.	22.4	4,500	
						2,500	744.0	− 9.6	.....	60	1.61	wnw.	22.8	.....	
						2,750	720.7	−10.4	.....	56	1.41	wnw.	23.2	6,700	
5:52	971.2	−1.8	87	sw.	4.9	3,000	697.5	−11.2	.....	52	1.21	wnw.	23.6	.....	
						3,032	694.3	−11.3	0.37	51	1.18	wnw.	23.7	7,500	
						3,000	697.5	−11.2	.....	51	1.19	wnw.	23.4	.....	
						2,750	720.7	−10.1	.....	55	1.41	wnw.	21.3	.....	
						2,500	744.0	− 9.0	.....	59	1.68	wnw.	19.2	.....	
						2,250	768.3	− 8.0	.....	62	1.92	wnw.	17.1	.....	
6:11	971.4	−1.6	83	sw.	5.4	2,069	786.6	− 7.2	0.55	65	2.16	wnw.	15.5	.....	
						2,000	793.7	− 6.8	.....	62	2.13	wnw.	15.9	4,600	
						1,750	819.8	− 5.4	.....	52	2.02	wnw.	17.6	2,700	
6:41	971.8	−1.6	81	w.	5.8	1,615	833.8	− 4.7	0.62	46	1.90	wnw.	18.5	.....	
						1,500	846.6	− 4.0	.....	47	2.05	wnw.	19.1	.....	
						1,250	873.8	− 2.4	.....	49	2.45	wnw.	20.3	.....	
6:54	971.9	−1.5	82	w.	4.5	1,135	886.1	− 1.7	0.56	50	2.65	wnw.	20.9	700	
						1,000	901.3	− 0.9	.....	52	2.95	wnw.	20.8	.....	
						750	929.8	0.5	.....	55	3.48	wnw.	20.6	0	
7:11	972.1	−1.9	90	w.	4.5	687	937.4	0.8	−0.96	56	3.62	wnw.	20.5	.....	
						500	959.5	− 1.0	.....	76	4.27	w.	10.2	.....	
7:16	972.1	−2.0	87	w.	4.5	396	972.1	− 2.0	.....	87	4.50	w.	4.5	.....	Cloudless.

December 11, 1918, series (No. 7).

A. M.															
8:13	972.5	−1.6	79	w.	5.4	396	972.5	− 1.6	.....	79	4.22	w.	5.4	.....	Cloudless.
						500	960.4	0.0	.....	69	4.22	wnw.	12.4	.....	
8:19	972.5	−1.2	77	w.	5.4	573	951.2	1.1	−1.53	62	4.10	wnw.	17.3	.....	
						750	931.0	0.3	.....	56	3.49	wnw.	17.9	0	
						1,000	902.1	− 0.7	.....	47	2.71	wnw.	18.8	.....	
8:34	972.7	−1.0	76	w.	5.4	1,115	889.2	− 1.2	0.43	43	2.38	wnw.	19.2	700	
						1,250	874.7	− 1.8	.....	41	2.16	wnw.	18.7	.....	
						1,500	847.8	− 3.0	.....	38	1.71	w.	17.7	.....	
8:48	972.7	−0.6	77	w.	6.3	1,639	833.1	− 3.6	0.46	34	1.54	w.	17.1	.....	
						1,750	821.8	− 4.3	.....	35	1.49	w.	17.5	2,200	
						2,000	796.2	− 6.0	.....	38	1.40	wnw.	18.3	.....	
						2,250	770.8	− 7.7	.....	41	1.30	wnw.	19.2	.....	
9:06	973.0	0.2	71	w.	6.7	2,262	769.3	− 7.8	0.67	41	1.29	wnw.	19.2	.....	
						2,500	745.0	− 9.0	.....	38	1.08	wnw.	21.3	4,500	
						2,750	722.5	−10.2	.....	34	0.87	wnw.	23.0	6,000	
						3,000	700.0	−11.5	.....	31	0.70	w.	25.8	6,300	
9:47	973.2	1.2	62	w.	5.4	3,191	682.3	−12.4	0.54	28	0.59	w.	27.5	7,300	
						3,000	700.0	−11.3	.....	28	0.65	w.	24.8	.....	
						2,750	722.5	− 9.8	.....	28	0.74	w.	25.9	3,500	
						2,500	746.0	− 8.4	.....	29	0.87	w.	24.9	.....	
						2,250	770.8	− 6.9	.....	29	0.99	w.	24.0	.....	
10:41	972.8	2.9	58	w.	6.3	2,167	778.8	− 6.4	0.76	29	1.03	w.	23.7	.....	
						2,000	796.2	− 5.1	.....	28	1.11	w.	21.7	2,200	
						1,750	822.1	− 3.2	.....	26	1.22	w.	18.7	.....	
						1,500	848.4	− 1.4	.....	24	1.31	w.	15.7	1,170	
11:09	972.6	3.6	50	wnw.	5.8	1,372	861.6	− 0.4	0.48	23	1.36	w.	14.1	.....	
						1,250	874.7	0.2	.....	25	1.55	w.	13.7	380	
						1,000	902.1	1.4	.....	28	1.89	wnw.	12.9	.....	
11:21	972.5	4.1	49	w.	6.3	957	907.1	1.6	−0.70	29	1.99	wnw.	12.7	.....	
11:24	972.5	4.2	49	w.	6.3	800	925.1	0.5	0.97	33	2.09	wnw.	8.9	.....	
						750	931.0	1.0	.....	35	2.30	wnw.	8.5	0	
						500	960.4	3.4	.....	43	3.35	wnw.	6.3	.....	
11:33	972.4	4.4	47	wnw.	5.4	396	972.4	4.4	.....	47	3.93	wnw.	5.4	.....	Few Cl.St. on horizon.

December 11, 1918, series (No. 8).

P. M.															
12:24	972.0	5.6	50	wsw.	6.3	396	972.0	5.6	.....	50	4.55	wsw.	6.3	.....	Few Ci., w.
						500	959.3	4.3	.....	51	4.24	wsw.	6.6	0	
1:27	971.5	6.1	47	wsw.	6.3	735	931.7	1.5	1.21	53	3.61	w.	7.4	.....	
						750	930.0	0.7	.....	51	3.28	w.	8.9	.....	
						1,000	901.8	0.2	.....	49	3.04	w.	10.0	.....	
						1,250	874.0	− 1.1	.....	45	2.51	w.	12.4	.....	
1:38	971.4	6.2	46	wsw.	5.8	1,267	871.8	− 1.2	0.51	45	2.49	w.	12.6	.....	
						1,500	846.9	− 2.7	.....	47	2.29	w.	13.9	.....	
						1,750	820.2	− 4.2	.....	49	2.11	w.	15.4	2,500	
						2,000	794.6	− 5.8	.....	52	1.95	w.	16.8	.....	
						2,250	769.8	− 7.4	.....	54	1.76	w.	18.3	4,600	1/10 Ci., w.
2:02	971.3	6.5	43	wsw.	5.4	2,463	748.7	− 8.7	0.63	56	1.63	w.	19.5	.....	
						2,500	745.7	− 8.0	.....	53	1.64	w.	20.0	.....	
2:06	971.3	6.5	43	wsw.	5.4	2,609	734.9	− 6.0	−1.99	45	1.66	w.	21.5	5,800	
						2,750	722.0	− 6.6	.....	43	1.50	w.	21.3	.....	
						3,000	699.0	− 7.7	.....	39	1.24	w.	21.0	7,000	
						3,250	677.6	− 8.8	.....	36	1.04	w.	20.8	.....	
						3,500	656.1	− 9.9	.....	32	0.84	w.	20.5	.....	1/10 Ci., w.; 2/10 Cl.St., w.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 11, 1918, series (No. 8)—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
2:57	971.3	6.6	52	sw.	5.4	3,731	636.6	−10.9	0.47	29	0.69	w.	20.2	8,200	Solar halo, 22° radius, from 2:38 to 4:18 p. m.
						3,500	656.2	− 9.7		29	0.77	w.	19.6		
						3,250	678.0	− 8.5		28	0.83	w.	19.0		
						3,000	700.0	− 7.3		27	0.89	w.	18.5		
3:22	971.3	6.7	46	sw.	5.4	2,769	721.1	− 6.1	−2.00	27	0.99	w.	17.9	5,500	
						2,750	723.1	− 6.5		28	0.99	w.	18.3		
3:26	971.3	6.8	46	sw.	5.4	2,695	728.0	− 7.6	0.46	29	0.93	w.	19.4		
						2,500	746.8	− 6.7		40	1.39	w.	19.9		
						2,250	771.0	− 5.6		55	2.10	wsw.	20.6	4,200	
3:48	971.3	6.7	52	sw.	4.9	2,128	782.8	− 5.0	0.67	62	2.49	wsw.	20.9		7/10 Cl.St., w.
						2,000	795.7	− 4.1		60	2.60	wsw.	19.5		
						1,750	821.1	− 2.5		57	2.83	sw.	16.7	2,500	
						1,500	847.8	− 0.8		53	3.03	sw.	13.9		
4:07	971.3	6.1	51	s.	4.9	1,399	858.1	− 0.1	0.60	52	3.15	sw.	12.8		
						1,250	874.4	0.8		52	3.36	sw.	11.9		
						1,000	901.8	2.3		52	3.75	ssw.	10.4	1,010	
						750	930.0	3.8		52	4.17	ssw.	8.9		
4:37	971.3	5.2	51	s.	4.0	701	935.5	4.1	0.16	52	4.26	ssw.	8.6	0	
						500	959.3	4.4		56	4.69	s.	5.6		
4:53	971.3	4.6	58	s.	4.0	396	971.3	4.6		58	4.92	s.	4.0		5/10 Cl.St., w.; 3/10 A.St., w.

December 12, 1918.

A. M.															
7:19	966.8	1.6	77	sse.	4.5	396	966.8	1.6		77	5.28	sse.	4.5		6/10 A.St., wsw.; 4/10 St.Cu., sw.
						500	955.0	2.9		76	5.72	s.	8.5		
						750	926.2	6.2		73	6.92	ssw.	18.1		
7:28	966.7	1.6	80	sse.	4.5	761	924.3	6.3	−1.29	73	6.97	ssw.	18.5	0	
						1,000	898.0	4.8		72	6.19	ssw.	17.5		
						1,250	870.8	3.3		72	5.57	ssw.	16.9	810	4/10 A.St., wsw.; 4/10 A.Cu., sw.; 2/10 St.Cu., sw.
						1,500	844.0	1.7		71	4.91	ssw.	15.6	2,000	
8:00	966.5	2.0	74	sse.	4.5	1,696	823.6	0.5	0.62	71	4.49	ssw.	14.8		
						1,750	818.2	0.3		69	4.31	ssw.	15.2		
						2,000	793.3	−0.8		61	3.48	ssw.	16.9	2,000	
8:17	966.6	2.2	75	se.	4.9	2,238	769.6	−1.8	0.42	53	2.79	ssw.	18.5		
						2,250	768.5	−1.9		54	2.82	ssw.	18.6		4/10 A.St., sw.; 6/10 St. Cu., sw.
						2,500	744.7	−3.3		73	3.39	sw.	21.4	4,000	
						2,750	721.4	−4.6		92	3.82	sw.	24.1		Altitude St.Cu. base about 2,850 m.
8:30	966.7	2.4	74	sse.	4.9	2,849	712.7	−5.2	0.56	100	3.94	sw.	25.2		
						3,000	698.7	−6.2		100	3.62	sw.	23.5		
8:39	966.8	2.5	77	sse.	4.9	3,191	681.3	−7.5	0.64	100	3.23	sw.	21.3	7,500	
						3,000	698.7	−6.3		100	3.59	sw.	23.9		
						2,750	721.4	−4.8		99	4.04	ssw.	20.3	5,400	
9:07	966.9	2.9	78	sse.	4.0	2,547	740.3	−3.6	0.58	99	4.47	ssw.	19.9		
						2,500	744.7	−3.3		92	4.27	ssw.	19.7		
						2,250	768.5	−1.9		52	2.71	ssw.	18.5		
9:17	967.0	3.0	77	sse.	4.0	2,239	769.6	−1.8	0.41	50	2.63	ssw.	18.5		
						2,000	793.6	−0.7		68	3.92	ssw.	19.6	3,700	
						1,759	819.0	−0.4		87	5.14	s.	20.8		
9:38	967.1	3.2	78	sse.	3.6	1,632	831.0	0.9	0.50	96	6.26	s.	21.4	2,800	10/10 St.Cu., sw.
						1,500	844.9	1.5		92	6.27	s.	22.5		
						1,250	870.8	2.8		84	6.27	s.	24.7	760	Light rain began 9:55 a. m. and continued at end of flight.
9:57	967.2	3.5	79	sse.	4.0	1,088	888.4	3.6	0.58	79	6.25	s.	26.1		
						1,000	898.0	4.1		80	6.55	s.	26.8		
						750	926.2	5.6		81	7.37	s.	27.5		
10:07	967.2	3.4	81	sse.	4.0	742	926.9	5.6	−0.64	81	7.37	s.	27.5	0	
						500	955.0	4.1		81	6.63	sse.	11.1		
10:12	967.2	3.4	81	sse.	4.0	396	967.2	3.4		81	6.32	sse.	4.0		10/10 St.Cu., sw.

December 13, 1918.

A. M.															
8:16	965.4	−0.6	92	nnw.	3.1	396	965.4	−0.6		92	5.87	nnw.	3.1		10/10 St., n.
						500	953.4	−1.9		96	5.01	nnw.	7.2		
8:20	965.4	−0.8	92	nnw.	4.0	623	938.2	−3.5	2.28	100	4.56	nnw.	12.1	0	Altitude of St. base about 700 m.
						750	923.6	−1.5		94	5.07	nnw.	10.7	330	
8:50	965.8	−1.0	88	n.	3.1	918	904.5	1.1	−1.56	86	5.69	n.	8.8	260	
						1,000	895.3	0.8		87	5.63	n.	8.2	590	7/10 A.St., ssw.; 3/10 St.Cu., n.
						1,250	868.1	0.0		90	5.50	n.	6.6	680	
						1,500	841.5	−0.9		93	5.27	n.	4.9		
9:52	965.6	−1.0	88	n.	4.5	1,511	840.2	−0.9	0.57	93	5.27	n.	4.8		
						1,500	841.5	−0.8		92	5.25	n.	4.9		
						1,250	868.1	1.2		62	4.13	n.	8.2	460	
10:25	965.4	−0.8	88	n.	3.1	1,078	886.6	2.6	−0.94	42	3.10	n.	10.4	0	
						1,000	895.3	1.9		49	3.73	n.	10.2		
						750	923.6	−0.5		72	4.22	n.	9.5		
10:41	965.3	−0.7	86	n.	4.0	589	942.1	−2.0	0.67	86	4.45	n.	9.3		9/10 A.St., ssw.
10:43	965.3	−0.7	86	n.	4.0	500	953.4	−1.4		86	4.68	n.	6.9		1/10 St.Cu., n.
						393	965.3	−0.7		86	4.95	n.	4.0		

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 14, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	Volts.	
7:47	970.8	−1.0	88	nnw.	5.4	396	970.8	−1.0	.....	88	4.38	nnw.	5.4	.....	Cloudless.
						500	959.3	0.4	.....	73	4.59	nnw.	8.0	.....	
						750	931.2	3.8	.....	38	3.05	nnw.	14.2	.....	
9:13	972.5	0.4	81	nw.	4.9	770	928.6	4.1	−1.36	35	2.87	nnw.	14.7	0	Cloudless.
						1,000	903.0	2.8	.....	33	2.47	nnw.	14.7	.....	
						1,250	875.6	1.4	.....	30	2.03	nnw.	14.7	560	
						1,500	848.9	0.1	.....	28	1.72	nnw.	14.8	.....	
						1,750	822.6	−1.3	.....	25	1.37	nnw.	14.8	.....	
9:35	972.7	1.1	80	nw.	4.9	1,755	821.6	−1.3	0.55	25	1.37	nnw.	14.8	1,240	
						2,000	797.0	−2.9	.....	29	1.39	nnw.	16.1	.....	
						2,250	772.4	−4.6	.....	34	1.41	nnw.	17.4	2,000	
						2,500	748.5	−6.2	.....	38	1.50	nnw.	18.7	.....	Few Ci. on wsw. horizon.
10:20	973.1	2.0	74	nnw	4.9	2,617	737.2	−7.0	0.65	40	1.35	nnw.	19.3	.....	
10:22	973.1	2.0	74	nnw.	4.9	2,655	732.6	−4.6	−0.53	29	1.20	nnw.	18.5	.....	
						2,750	725.0	−5.1	.....	26	1.03	nnw.	18.7	3,000	
						3,000	702.0	−6.1	.....	21	0.77	nnw.	19.1	3,500	
10:44	973.2	3.0	72	nw.	4.0	3,242	683.6	−7.1	0.43	16	0.54	nnw.	19.5	.....	
						3,250	683.4	−7.0	.....	16	0.54	nnw.	19.4	.....	
10:52	973.3	3.1	71	nnw.	4.0	3,317	675.1	−6.2	−0.78	16	0.58	nnw.	18.9	4,000	
						3,250	683.4	−6.3	.....	14	0.53	nnw.	19.6	.....	
11:14	973.1	3.8	68	nnw.	4.5	3,132	693.6	−6.5	0.34	11	0.39	nnw.	21.1	.....	
						3,000	702.0	−6.0	.....	11	0.41	nnw.	20.9	.....	
11:25	973.0	4.2	67	nnw.	5.4	2,751	724.6	−5.2	−0.74	10	0.39	nnw.	21.5	.....	
11:29	973.0	4.2	66	nnw.	4.5	2,616	737.2	−6.2	0.37	17	0.62	nnw.	18.3	.....	
						2,500	748.5	−5.5	.....	20	0.75	nnw.	18.9	2,300	
						2,250	772.4	−4.8	.....	27	1.10	nnw.	20.1	.....	
11:42	972.8	5.1	64	nnw.	4.5	2,189	778.3	−4.6	0.87	29	1.20	nnw.	20.4	.....	
						2,000	797.0	−3.0	.....	28	1.33	nnw.	17.8	.....	
						1,750	822.6	−0.8	.....	25	1.48	nnw.	14.5	1,330	
11:54	972.7	5.0	65	nnw.	3.6	1,655	831.4	0.0	0.51	23	1.59	nnw.	13.3	.....	
						1,500	848.9	0.8	.....	26	1.68	nnw.	13.4	.....	
						1,250	875.6	2.1	.....	25	1.78	nnw.	13.5	560	
P. M.															
12:10	972.6	5.5	62	nw.	3.6	1,137	887.5	2.7	−0.51	25	1.86	nnw.	13.5	.....	
						1,000	903.0	2.0	.....	30	2.12	nnw.	10.7	.....	
12:13	972.5	5.6	60	nw.	4.5	805	934.7	1.0	1.08	37	2.43	nnw.	6.8	.....	
						750	931.2	2.3	.....	40	2.88	nnw.	6.5	0	
						500	961.5	4.3	.....	53	4.40	nw.	5.1	.....	
12:21	972.5	5.4	59	nw.	4.5	396	972.5	5.4	.....	59	5.20	nw.	4.5	.....	Few Cl.St. on west horizon.

December 15, 1918.

A. M.															
7:25	970.1	0.2	89	sw.	4.9	396	970.1	0.2	.....	89	5.52	sw.	4.9	.....	Few Cl.St., wnw.
						500	958.0	1.8	.....	69	4.80	wsw.	5.6	.....	
8:40	970.5	1.5	81	sw.	2.7	536	953.8	2.4	−1.58	62	4.53	w.	5.9	0	
						750	929.4	10.0	.....	41	5.03	sw.	5.7	.....	
8:58	970.6	1.5	81	sw.	3.1	765	927.6	10.5	−3.92	40	5.08	sw.	5.7	.....	
						750	929.4	4.1	.....	50	4.10	sw.	5.7	.....	
9:01	970.6	1.1	85	sw.	3.6	604	945.9	3.6	−1.25	51	4.03	sw.	5.7	.....	
						500	958.1	2.3	.....	69	4.97	sw.	4.7	.....	
9:02	970.6	1.0	86	sw.	3.6	396	970.6	1.0	.....	86	5.65	sw.	3.6	.....	1/10 Cl.St., wnw.

December 16, 1918 (No. 1).

A. M.															
7:44	972.5	1.6	90	e.	3.6	396	972.5	1.6	.....	90	6.17	e.	3.6	.....	10/10 Cl.St., wsw.
						500	960.5	2.6	.....	84	6.19	se.	8.0	.....	
7:57	972.6	1.5	90	ese.	4.0	732	933.2	5.0	−1.01	72	6.28	ssw.	17.8	0	
						750	931.7	5.2	.....	71	6.28	ssw.	17.8	.....	
						1,000	903.3	8.0	.....	51	5.47	ssw.	17.7	.....	
8:03	972.6	1.6	90	ese.	4.0	1,138	888.2	9.5	−1.11	40	4.75	ssw.	17.6	.....	
						1,250	876.7	9.2	.....	36	4.19	ssw.	17.2	.....	
8:11	972.7	1.4	89	ese.	4.5	1,367	864.3	8.8	0.31	32	3.63	ssw.	16.8	1,400	
						1,500	851.0	7.7	.....	32	3.36	ssw.	16.7	.....	
						1,750	825.6	3.9	.....	33	2.67	ssw.	16.6	.....	
						2,000	800.5	3.5	.....	33	2.59	ssw.	16.5	.....	
8:23	972.9	1.5	88	ese.	3.6	2,036	796.7	3.2	0.84	33	2.54	ssw.	16.5	2,800	
						2,250	776.0	1.8	.....	30	2.09	ssw.	18.2	.....	
						2,500	752.0	−0.2	.....	27	1.62	ssw.	20.1	.....	
8:39	973.1	1.8	90	ese.	3.1	2,677	735.4	−1.0	0.66	25	1.40	ssw.	21.5	4,200	
						2,500	752.0	−0.2	.....	26	1.56	ssw.	20.9	.....	
						2,250	776.0	1.8	.....	28	1.95	ssw.	20.2	.....	1/10 Ci., wsw.
						2,000	800.5	3.5	.....	29	2.28	ssw.	19.4	.....	6/10 Cl.St., wsw.
9:12	973.5	2.2	86	ese.	3.6	1,912	808.8	4.1	0.60	30	2.46	ssw.	19.1	2,300	2/10 A.St., wsw.
						1,750	825.6	5.1	.....	31	2.72	ssw.	19.0	.....	Solar halo, 22° radius, from 8:30 to 9:30 a. m.
						1,500	851.0	6.6	.....	32	3.12	ssw.	18.8	.....	
						1,250	877.7	8.1	.....	33	3.56	ssw.	18.7	.....	
9:28	973.8	3.0	87	se.	3.6	1,182	884.4	8.5	−0.58	33	3.66	ssw.	18.6	1,200	
9:38	973.9	3.3	88	se.	3.1	1,078	895.8	7.9	−1.24	38	4.05	ssw.	20.1	.....	
						1,000	904.6	6.9	.....	46	4.58	ssw.	18.9	.....	
9:43	974.0	3.6	87	se.	3.1	836	922.8	4.9	−0.11	62	5.37	ssw.	16.4	.....	
						750	933.1	4.8	.....	66	5.68	ssw.	13.9	330	
						500	962.2	4.5	.....	77	6.48	sse.	6.6	.....	
9:57	974.3	4.4	82	sse.	3.6	396	974.3	4.4	.....	82	6.86	sse.	3.6	.....	2/10 Ci., wsw.; 5/10 Cl.St., wsw.; few Cl.Cu., wsw.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 16, 1918 (No. 2).

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	Volts.	
10:45	974.3	7.0	73	sse.	4.9	396	974.3	7.0	.....	73	7.31	sse.	4.9	.....	1/10 Cl., wsw.; 6/10 Cl.St., wsw.
						500	962.2	5.8	.....	73	6.73	sse.	9.0	.....	
10:50	974.3	7.2	72	sse.	5.8	630	946.8	4.4	1.11	73	6.11	s.	14.1	.....	
						750	933.0	5.0	.....	68	5.93	s.	14.9	0	
						1,000	904.9	6.1	.....	56	5.28	ssw.	16.7	.....	
						1,250	877.7	7.3	.....	45	4.60	ssw.	18.4	.....	
11:04	974.3	7.2	74	sse.	5.4	1,267	876.0	7.4	−0.47	44	4.53	ssw.	18.5	1,100	
						1,500	851.4	6.7	.....	38	3.73	ssw.	18.9	.....	3/10 Cl., wsw.; 4/10 Cl.St., wsw.
						1,750	826.0	5.9	.....	31	2.88	ssw.	19.4	2,200	
						2,000	801.1	5.1	.....	24	2.11	ssw.	19.9	.....	
11:25	974.2	8.0	73	s.	6.3	2,076	793.5	4.9	0.31	22	1.91	ssw.	20.0	3,000	
						2,250	776.8	4.1	.....	20	1.64	ssw.	21.3	3,500	
						2,500	753.0	3.0	.....	17	1.29	ssw.	23.1	4,000	
						2,750	729.9	1.8	.....	14	0.97	ssw.	24.9	.....	
11:58	974.0	9.6	77	s.	6.7	2,777	727.8	1.7	0.43	14	0.97	ssw.	25.1	4,300	
						2,750	729.9	1.8	.....	14	0.97	ssw.	25.1	.....	
						2,500	753.0	2.8	.....	15	1.12	ssw.	24.9	.....	
						2,250	776.8	3.8	.....	17	1.36	ssw.	24.7	.....	
P. M.															
12:30	973.8	9.8	68	s.	9.8	2,198	781.6	4.0	0.47	17	1.38	ssw.	24.6	.....	
						2,000	801.1	4.9	.....	19	1.65	ssw.	22.5	.....	
						1,750	826.0	6.1	.....	22	2.07	ssw.	19.9	2,800	
						1,500	851.4	7.3	.....	25	2.56	ssw.	17.3	.....	
1:02	973.6	10.0	62	ssw.	8.0	1,490	852.3	7.3	−0.71	25	2.56	ssw.	17.2	1,700	
						1,250	877.7	5.6	.....	43	3.91	ssw.	16.8	1,040	
1:19	973.6	10.3	67	ssw.	9.8	1,123	891.2	4.7	0.54	53	4.53	ssw.	16.5	.....	
						1,000	904.9	5.4	.....	58	5.20	ssw.	14.4	.....	
						750	933.0	6.7	.....	66	6.77	s.	10.1	0	
1:31	973.6	9.9	67	ssw.	8.5	695	939.0	7.0	1.41	71	7.11	s.	9.2	.....	
						500	961.8	9.7	.....	68	8.18	s.	6.8	.....	6/10 Cl.St., wsw.
1:36	973.6	9.8	68	s.	6.7	396	973.6	9.8	.....	68	8.24	s.	6.7	.....	2/10 A.St., wsw.; 1/10 A.Cu., wsw.; few St.Cu., ssw.

December 17, 1918.

A. M.															
7:51	979.4	0.4	100	nne.	3.6	396	979.4	0.4	.....	100	6.29	nne.	3.6	.....	Dense fog.
						500	967.4	−0.8	.....	100	5.71	nne.	.....	.....	
8:17	979.6	0.4	100	ne.	3.6	705	942.4	−3.1	1.13	99	4.66	nne.	.....	0	
						500	967.4	−0.8	.....	100	5.71	nne.	.....	.....	
8:45	979.9	0.4	100	nne.	3.1	396	979.9	0.4	.....	100	6.29	nne.	3.1	.....	Dense fog.

December 20, 1918.

A. M.															
8:00	966.5	4.5	98	ene.	6.3	396	966.5	4.5	.....	98	8.25	ene.	6.3	.....	10/10 St., ene.
						400	953.6	4.0	.....	97	7.89	e.	7.9	.....	Altitude of St. base about 550 m.
						750	925.0	2.9	.....	96	7.23	ese.	11.7	0	
8:12	966.4	4.5	98	ene.	7.6	804	919.0	2.6	0.47	96	7.08	ese.	12.5	.....	
						1,000	897.0	3.4	.....	95	7.41	ese.	12.8	810	
						1,250	869.9	4.5	.....	95	8.00	se.	13.2	.....	
8:22	966.4	4.6	97	ene.	6.3	1,400	851.2	5.1	−0.42	94	8.26	se.	13.5	.....	2/10 St.Cu., se.; 8/10 St., ene.
						1,500	843.5	3.1	.....	97	7.40	se.	18.4	.....	
8:37	966.3	4.6	98	ene.	5.8	1,578	835.5	1.5	2.02	99	6.74	se.	22.2	640	Altitude of St.Cu. base about 1,600 m.
						1,750	817.2	0.9	.....	89	5.80	se.	22.4	.....	
						2,000	792.0	0.1	.....	75	4.61	se.	22.6	1,100	
						2,250	768.0	−0.7	.....	61	3.51	se.	22.8	.....	
						2,500	744.8	−1.5	.....	47	2.75	se.	23.1	.....	
8:57	966.2	4.7	98	ene.	8.0	2,631	732.5	−1.9	0.32	40	2.09	se.	23.2	1,400	Light fog during flight until 9:00 a. m.
						2,750	722.0	−2.9	.....	63	3.02	se.	22.6	1,700	
						3,000	699.0	−4.7	.....	80	3.30	se.	21.4	.....	
9:04	966.2	4.7	98	ene.	7.2	3,090	691.5	−5.4	0.79	90	3.49	se.	21.0	.....	
						3,000	699.0	−4.7	.....	81	3.34	se.	20.9	1,300	Light rain began 9:10 a. m. and continued at end of flight.
						2,750	722.0	−2.6	.....	56	2.80	se.	20.6	.....	
9:17	966.1	4.8	97	ene.	8.0	2,700	726.7	−2.2	0.59	51	2.60	se.	20.5	.....	
						2,500	745.2	−1.0	.....	65	3.65	se.	20.5	1,500	
						2,250	768.5	0.6	.....	82	5.23	se.	20.5	.....	
9:25	966.1	4.8	97	ene.	7.2	2,067	786.7	1.7	0.34	94	6.50	se.	20.5	.....	
						2,000	793.0	1.9	.....	94	6.59	se.	20.6	.....	
						1,750	817.8	2.8	.....	95	7.15	ese.	21.2	490	
						1,500	843.5	3.7	.....	97	7.72	ese.	21.8	.....	
						1,250	870.0	4.6	.....	98	8.31	e.	22.4	.....	
						1,000	897.0	5.3	.....	99	8.82	e.	22.9	.....	
9:48	966.0	4.8	97	ene.	7.2	985	898.4	5.4	−1.07	99	8.88	e.	22.9	0	
						750	925.0	2.9	.....	97	7.30	ene.	21.9	.....	
9:57	965.9	4.9	97	ene.	7.6	732	926.8	2.7	0.97	97	7.20	ene.	25.0	.....	
						500	953.6	4.3	.....	97	8.06	ene.	13.0	.....	
10:03	965.9	5.0	97	ene.	7.6	396	965.9	5.0	.....	97	8.46	ene.	7.6	.....	10/10 St., ene.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 21, 1918.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*Volts.*	
8:01	961.1	4.0	94	sse.	4.0	396	961.1	4.0	.....	94	7.64	sse.	4.0	.....	10/10 St.Cu., sse.
						500	918.8	3.5	.....	96	7.53	sse.	4.9	.....	
8:08	961.2	3.8	95	sse.	4.0	722	923.3	2.5	0.46	99	7.24	s.	6.7	.....	
						750	920.0	2.3	.....	99	7.14	s.	6.8	.....	9/10 St.Cu., sse.; 1/10 St., s.
						1,000	891.8	0.2	.....	99	6.14	s.	7.6	.....	Altitude of St.Cu., base about 1,400 m.
						1,250	864.8	− 1.8	.....	98	5.15	sse.	8.4	0	
9:01	961.8	3.6	97	sse.	3.1	1,441	844.5	− 3.4	0.82	98	4.51	sse.	9.0	170	1/10 Ci.St., s.; 6/10 St.Cu., sse.; 3/10 St., s.
						1,500	838.0	− 3.3	.....	91	4.22	sse.	9.2	.....	
9:03	961.8	3.6	97	sse.	3.6	1,619	825.9	− 3.2	−0.11	78	3.65	sse.	9.5	.....	
						1,750	812.0	− 3.5	.....	77	3.51	sse.	9.6	.....	
						2,000	786.5	− 4.0	.....	74	3.23	sse.	9.8	.....	
						2,250	762.4	− 4.5	.....	72	3.02	s.	10.1	.....	10/10 St., s.
9:35	962.0	4.0	95	s.	3.6	2,418	740.6	− 4.8	0.20	70	2.86	s.	10.2	1,200	
						2,500	738.5	− 5.3	.....	70	2.74	s.	10.1	1,500	
						2,750	715.5	− 6.9	.....	70	2.39	s.	9.8	.....	
						3,000	693.0	− 8.5	.....	70	2.07	s.	9.5	1,700	
						3,250	671.3	−10.0	.....	70	1.82	s.	9.2	.....	
10:12	962.1	4.2	96	s.	4.0	3,320	654.8	−10.5	0.02	70	1.74	s.	9.1	1,300	
						3,250	671.3	−10.0	.....	71	1.85	s.	9.3	.....	
						3,000	693.0	− 8.5	.....	74	2.19	s.	9.9	.....	
						2,750	715.5	− 6.9	.....	78	2.66	s.	10.5	.....	
10:27	962.1	4.2	96	s.	4.0	2,533	736.2	− 5.6	0.58	81	3.09	s.	11.1	.....	
						2,500	739.0	− 5.4	.....	81	3.14	s.	11.1	.....	
						2,250	763.0	− 4.0	.....	80	3.50	s.	9.9	1,100	
						2,000	787.3	− 2.5	.....	79	3.92	sse.	9.7	.....	
10:47	962.1	4.3	97	s.	4.0	1,837	803.9	− 1.6	−1.28	78	4.17	sse.	9.6	730	
10:50	962.1	4.3	96	s.	4.0	1,766	811.2	− 2.5	0.38	98	4.86	s.	6.3	.....	
						1,750	812.8	− 2.4	.....	98	4.90	s.	6.3	.....	
						1,500	838.5	− 1.7	.....	98	5.19	s.	6.2	.....	
						1,250	865.2	− 0.5	.....	99	5.80	ssw.	6.1	.....	
						1,000	892.3	0.4	.....	99	6.23	ssw.	6.1	420	
						750	920.9	1.4	.....	99	6.69	ssw.	6.0	0	
11:11	962.0	4.4	96	ssw.	4.9	741	922.0	1.4	0.87	99	6.69	ssw.	6.0	.....	Altitude of St. base about 550 m.
						500	919.2	3.5	.....	98	7.69	ssw.	4.6	.....	
11:16	962.0	4.4	97	ssw.	4.0	396	962.0	4.4	.....	97	8.12	ssw.	4.9	.....	10/10 St., ssw.

December 22, 1918.

A. M.															
7:31	971.8	−3.8	91	nw.	8.9	396	971.8	− 3.8	.....	91	4.04	nw.	8.9	.....	6/10 St.Cu., nw.; 4/10 St., nw.
						500	939.0	− 4.9	.....	93	3.77	nw.	10.9	.....	
						750	929.1	− 7.6	.....	97	3.11	nw.	15.6	0	Altitude of St. base about 800 m.
7:34	971.9	−4.0	91	nw.	8.0	782	925.2	− 8.0	1.09	98	3.04	nw.	16.2	.....	
7:45	972.1	−4.2	91	nw.	9.4	946	905.9	− 9.7	2.06	100	2.67	nw.	15.6	.....	
						1,000	900.0	− 8.0	.....	97	3.01	nw.	14.9	.....	
7:58	972.3	−4.3	91	nw.	7.6	1,158	881.8	− 3.0	−3.16	89	4.23	nw.	13.0	860	
						1,250	871.9	− 3.4	.....	92	4.23	nw.	12.7	.....	
						1,500	845.0	− 4.4	.....	99	4.18	nw.	12.0	.....	
8:10	972.6	−4.4	91	nw.	7.6	1,538	840.7	− 4.6	0.42	100	4.15	nw.	11.9	1,500	
8:53	973.8	−5.0	90	nnw.	8.0	1,652	829.6	− 3.8	−0.70	93	4.13	nw.	9.8	.....	1/10 A.Cu., nw.; 8/10 St.Cu., nw.; 1/10 St., nnw
						1,750	819.3	− 4.1	.....	89	3.85	nw.	10.5	2,800	
9:10	974.2	−5.4	90	nnw.	9.8	1,972	796.9	− 4.8	0.31	80	3.26	nw.	12.1	.....	
						2,000	794.5	− 4.9	.....	80	3.24	nw.	12.2	.....	
						2,250	769.5	− 6.2	.....	77	2.79	nw.	12.7	3,500	
						2,500	745.2	− 7.5	.....	74	2.39	nw.	13.3	.....	
						2,750	721.7	− 8.8	.....	72	2.08	nw.	13.9	.....	
						3,000	698.8	−10.1	.....	69	1.77	nw.	14.5	.....	
9:38	974.8	−5.2	86	nnw.	9.4	3,012	697.4	−10.2	0.58	69	1.76	nw.	14.5	.....	
						3,000	698.8	−10.1	.....	69	1.77	nw.	14.5	.....	
						2,750	721.7	− 8.5	.....	71	2.10	nw.	14.0	.....	
						2,500	745.2	− 6.9	.....	74	2.52	nw.	13.6	.....	4/10 A.Cu., nw.; 5/10 St.Cu., nw.; 1/10 St., nnw.
						2,250	769.5	− 5.3	.....	76	2.97	nw.	13.1	1,700	
9:56	975.2	−5.1	82	nnw.	8.8	2,189	775.6	− 4.9	0.25	77	3.12	nw.	13.0	3,400	
						2,000	794.5	− 4.4	.....	82	3.46	nw.	12.4	.....	
						1,750	820.2	− 3.8	.....	89	3.95	nw.	11.5	.....	
10:06	975.3	−5.2	84	nnw.	8.0	1,621	833.3	− 3.5	−0.88	92	4.20	nw.	11.1	.....	
						1,500	846.4	− 4.6	.....	93	3.86	nw.	11.2	2,000	
						1,250	873.4	− 6.8	.....	96	3.30	nnw.	11.3	1,500	
						1,000	902.0	− 9.0	.....	99	2.81	nnw.	11.4	.....	Altitude of St. base about 900 m.
10:30	975.5	−5.1	82	nnw.	7.2	905	913.6	− 9.8	0.33	100	2.64	nnw.	11.4	.....	
						750	932.5	− 9.3	.....	94	2.59	nnw.	13.7	.....	
10:37	975.5	−5.1	82	nnw.	8.9	723	935.5	− 9.2	1.26	93	2.59	nnw.	14.1	0	
						500	963.0	− 6.4	.....	85	3.03	nnw.	9.4	.....	
10:43	975.6	−5.1	82	nnw.	7.2	396	975.6	− 5.1	.....	82	3.26	nnw.	7.2	.....	2/10 A.Cu., nw.; 3/10 St.Cu., nw.; 4/10 St., nnw.

December 23, 1918.

A. M.															
8:17	979.9	−11.1	89	nne.	6.7	396	979.9	−11.1	.....	89	2.09	nne.	6.7	.....	7/10 A.St., wsw.; 3/10 St., nne.
						500	966.5	−12.2	.....	91	1.94	nne.	8.8	.....	
						750	935.5	−14.2	.....	96	1.71	nne.	12.9	.....	
8:22	979.8	−11.2	93	nne.	7.2	757	934.4	−14.8	1.02	97	1.63	nne.	14.1	680	
						1,000	905.3	− 7.2	.....	74	2.46	ne.	11.4	.....	
8:37	979.7	−11.0	89	nne.	7.2	1,049	899.6	− 5.7	−3.12	69	2.61	ne.	10.8	1,500	
						1,250	876.6	− 6.2	.....	62	2.24	ne.	9.8	2,600	8/10 A.St., wsw.; 2/10 St., nne.
						1,500	849.0	− 6.9	.....	53	1.81	ene.	8.6	3,800	
						1,750	822.5	− 7.5	.....	46	1.49	ene.	7.3	4,500	
9:47	979.4	−10.8	93	nne.	6.3	1,865	810.1	− 7.8	2.57	42	1.32	ene.	6.8	.....	
						2,000	796.5	− 8.0	.....	70	2.17	ene.	5.2	.....	Light snow throughout flight.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 23, 1918—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*Volts.*	
9:55	979.4	−10.8	93	nne.	8.0	2,206	775.5	− 8.3	0.32	88	2.66	ene.	5.3		
						2,000	796.5	− 7.3		68	2.24	ene.	6.2	4,200	
						1,750	822.5	− 6.1		45	1.64	ne.	7.4		
10:21	979.5	−10.6	93	nne.	7.6	1,744	823.5	− 6.1	0.13	44	1.61	ne.	7.4	4,400	
						1,500	849.0	− 5.8		49	1.84	ne.	9.1	4,100	
						1,250	876.6	− 5.5		54	2.07	ne.	10.9		
10:42	979.6	−10.6	93	nne.	6.7	1,050	899.6	− 5.2	−3.51	58	2.29	ne.	12.3	5,300	
						1,000	905.3	− 7.0		66	2.30	ne.	12.4		
10:50	979.6	−10.4	93	nne.	6.3	799	929.2	−14.0	0.89	100	1.81	nne.	13.0	1,500	
						750	935.5	−13.6		99	1.87	nne.	12.2		
						500	966.5	−11.3		95	2.19	nne.	8.3		
10:59	979.7	−10.4	93	nne.	6.7	396	979.7	−10.4		93	2.33	nne.	6.7		10/10 St., nne.

December 24, 1918.

A. M.															
8:14	972.4	− 8.3	94	n.	6.7	396	972.4	− 8.3		94	2.84	n.	6.7		6/10 St.Cu., nne.; 4/10 St., n.
						500	959.5	− 9.4		96	2.63	n.	11.4		Snow flurries at beginning and continued at end of flight.
8:20	972.4	− 8.3	91	nnw.	5.8	755	928.2	−11.8	0.98	99	2.19	n.	21.5	1,500	
						1,000	899.0	−13.8		99	1.82	nne.	18.2		
8:31	972.5	− 8.3	91	nnw.	8.0	1,080	889.7	−14.4	0.80	99	1.72	nne.	17.1		Altitude of St. base about 800 m.
8:39	972.5	− 8.5	91	nnw.	8.0	1,145	882.1	− 9.7	−7.24	63	1.68	nne.	14.4	4,500	Altitude of St.Cu. base about 1,000 m.
						1,250	870.5	−10.0		60	1.56	nne.	14.8		
						1,500	842.5	−10.8		54	1.31	nne.	15.9		
						1,750	815.2	−11.6		48	1.08	nne.	17.0	5,100	
						2,000	789.3	−12.4		42	0.88	nne.	18.0		
9:02	972.6	− 8.6	93	n.	7.6	2,065	782.6	−12.6	0.32	40	0.82	nne.	18.3	8,000	3/10 A.Cu., n.; 6/10 St.Cu., nne.; 1/10 St., n.
						2,250	764.0	−13.4		37	0.71	nne.	17.6		
						2,500	739.0	−14.4		31	0.59	nne.	16.5	8,800	
						2,750	715.0	−15.5		30	0.47	nne.	15.7	9,800	7/10 St.Cu., nne.; 3/10 St., n.
9:33	972.9	− 9.2	94	n.	7.6	2,980	693.6	−16.5	0.43	27	0.39	nne.	14.8		
						3,000	691.7	−16.6		32	0.45	nne.	14.8	9,300	Solar halo, 22° radius from 9:40 to 11:12 a. m.
9:48	972.9	− 9.2	93	n.	7.6	3,164	676.9	−17.4	0.53	70	0.92	nne.	14.6		
						3,000	692.0	−16.5		50	0.72	nne.	15.6	7,700	
10:33	973.3	− 8.5	90	n.	8.9	2,830	708.2	−15.5	0.53	29	0.46	nne.	16.7		
						2,750	715.8	−15.1		29	0.47	nne.	16.3		
						2,500	740.0	−13.8		28	0.52	nne.	14.9		
						2,250	764.0	−12.5		27	0.56	nne.	13.6		
10:54	973.5	− 8.0	88	n.	9.8	2,071	782.6	−11.5	0.13	27	0.61	nne.	12.6	5,100	6/10 Ci.St., nnw.; 4/10 St.Cu., n.
						2,000	789.3	−11.4		28	0.64	nne.	12.8		
						1,750	815.2	−11.1		31	0.73	nne.	13.4	4,800	
						1,500	842.5	−10.7		35	0.85	nne.	14.0		
						1,250	870.5	−10.4		38	0.95	nne.	14.6	8,300	
11:19	973.5	− 8.0	88	n.	6.3	1,173	879.6	−10.3	−2.45	39	0.99	nne.	14.8		
11:22	973.5	− 8.2	88	n.	6.3	1,042	894.8	−13.5	0.44	55	1.04	n.	16.3		Altitude of St.Cu. base about 800 m.
						1,000	899.4	−13.3		59	1.14	n.	16.2		
						750	929.2	−12.2		86	1.83	n.	15.3	3,500	
11:33	973.4	− 8.4	86	n.	8.6	676	938.6	−11.9	1.25	94	2.06	n.	15.1		
						500	960.4	− 9.7		86	2.30	n.	10.4		
11:38	973.4	− 8.4	82	n.	7.6	396	973.4	− 8.4		82	2.45	n.	7.6		5/10 Ci.St., nnw.; 5/10 St.Cu., n.

December 25, 1918.

A. M.															
7:19	973.5	−16.4	90	ssw.	3.1	396	973.5	−16.4		90	1.30	ssw.	3.1		Few St.Cu. near horizon.
						500	960.5	−13.4		88	1.68	sw.	5.1		
7:34	973.4	−16.4	90	ssw.	3.6	600	947.7	−10.6	−2.84	85	2.09	wsw.	7.0		
						750	929.5	− 8.6		45	1.32	w.	6.7		
8:07	973.2	−16.4	90	ssw.	4.0	771	926.8	− 8.3	−1.35	39	1.18	w.	6.7		
						1,000	900.0	− 8.5		35	1.04	w.	6.1	0	
						1,250	871.0	− 8.6		30	0.88	wnw.	5.4		
						1,500	843.6	− 8.8		25	0.72	wnw.	4.7		Cloudless.
9:56	972.0	−10.1	62	sw.	4.0	1,519	841.8	− 8.8	0.07	25	0.72	wnw.	4.6	1,800	
						1,750	816.8	− 9.7		24	0.64	wnw.	4.8	2,400	
						2,000	790.7	−10.7		24	0.59	nw.	5.0		
10:12	971.8	− 9.2	68	sw.	4.9	2,188	771.6	−11.4	0.50	23	0.53	nw.	5.2	1,700	
						2,000	790.7	−10.3		22	0.56	nw.	5.1		
						1,750	816.8	− 8.7		22	0.64	nw.	5.0	0	
						1,500	843.6	− 7.2		20	0.66	nw.	4.9		
10:26	971.5	− 8.8	69	ssw.	5.4	1,386	855.6	− 6.5	0.00	20	0.71	nw.	4.8		
						1,250	870.8	− 6.5		21	0.74	wnw.	5.1		
						1,000	899.0	− 6.5		23	0.81	w.	5.6		
						750	928.0	− 6.5		26	0.92	wsw.	6.1		
11:00	970.9	− 9.5	81	sw.	6.7	497	958.3	− 6.5	−2.68	28	0.99	sw.	6.6		
11:03	970.9	− 9.2	81	sw.	6.7	396	970.9	− 9.2		81	2.26	sw.	6.7		Few Ci.St., wnw.

December 26, 1918.

A. M.															
8:13	936.8	− 3.8	94	wsw.	2.7	396	936.8	− 3.8		94	4.17	wsw.	2.7		10/10 St.Cu., nw. Snow (dry) began 8:03, ended 9:16 a. m.
						500	913.8	− 3.9		95	4.19	w.	5.2		
						750	923.9	− 4.1		97	4.20	nw.	11.2		
8:25	936.7	− 3.3	94	w.	2.7	764	922.8	− 4.1	0.08	97	4.20	nw.	11.5	490	
						1,000	895.0	− 5.5		95	3.65	nw.	11.8	810	Altitude of St.Cu. base about 1,100
						1,250	867.0	− 6.9		93	3.17	nw.	12.1		
						1,500	840.1	− 8.4		90	2.69	nw.	12.4	950	
						1,750	813.8	− 9.8		88	2.32	nw.	12.8	1,800	

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 26, 1918—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*Volts.*	
9:27	936.7	−1.8	87	nw.	4.0	1,850	803.0	−10.4	0.58	87	2.18	nw.	12.9		
						2,000	787.8	−11.3		83	1.92	nw.	12.5	2,400	
						2,250	762.3	−12.8		78	1.37	nw.	12.0		9/10 St. Cu., nw.
10:13	936.9	−1.2	86	nw.	5.4	2,448	742.7	−14.0	0.60	73	1.32	nw.	11.5	3,000	
						2,500	737.4	−14.3		73	1.28	nw.	11.6	3,600	
						2,750	713.0	−15.8		75	1.15	nw.	12.0		
						3,000	690.0	−17.2		76	1.02	nw.	12.5	4,000	
						3,250	667.3	−18.7		78	0.90	nw.	12.9		
10:53	936.9	−0.4	83	nw.	5.4	3,500	646.0	−20.2		79	0.80	nw.	13.3		10/10 St.Cu., nw.
						3,599	637.3	−20.8	0.58	81	0.77	nw.	13.5		
						3,500	646.0	−20.2		81	0.82	nw.	13.0		
						3,250	667.3	−18.8		82	0.94	nw.	11.6		
						3,000	690.0	−17.4		82	1.08	nw.	10.2		
						2,750	713.0	−16.0		83	1.24	nw.	8.9	2,800	
11:18	936.8	−0.6	82	nw.	5.4	2,496	738.1	−14.5	0.75	83	1.44	nw.	7.5		
						2,250	762.3	−12.7		81	1.65	nw.	8.6		
						2,000	787.8	−10.8		78	1.89	nw.	9.8		
						1,850	813.8	− 8.9		75	2.14	nw.	10.9	1,800	
11:42	936.6	−0.4	81	nw.	4.9	1,713	817.5	− 8.6	−0.39	75	2.20	nw.	11.1		Misting began 11:43 a. m. and continued at end of flight.
11:44	936.6	−0.5	83	nw.	4.9	1,585	830.9	− 9.1	0.64	89	2.50	nw.	8.8		
						1,500	840.1	− 8.6		89	2.62	nw.	8.6		
						1,250	867.0	− 6.9		90	3.07	nw.	8.1	0	
						1,000	895.0	− 5.3		90	3.52	nw.	7.6		Altitude of St.Cu. base about 800 m.
P. M.															
12:05	936.5	−1.2	96	nw.	4.9	750	923.9	− 3.7		91	4.08	nw.	7.1		
						653	935.7	− 3.1	0.82	91	4.29	nw.	6.9		
						500	953.7	− 1.9		92	4.80	nw.	5.2		
12:11	935.4	−1.0	92	nw.	4.0	396	966.4	− 1.0		92	5.17	nw.	4.0		10/10 St.Cu., nw.

December 27, 1918.

A. M.															
8:17	970.0	−5.6	95	nnw.	4.5	396	970.0	− 5.6		95	3.62	nnw.	4.5		9/10 St.Cu., nnw. (upper); 1/10 St. Cu., nnw. (lower). Light snow flurries at beginning and continued at end of flight.
						500	957.2	− 6.4		95	3.38	nnw.	6.6		
						750	927.0	− 8.4		96	2.87	nnw.	11.7		
8:24	970.1	−5.6	95	nnw.	4.5	793	922.0	− 8.8	0.81	96	2.77	nnw.	12.6	0	
						1,000	897.5	−10.5		98	2.43	nnw.	13.1		Altitude of St.Cu. base (lower) about 1,050 m.
8:33	970.1	−5.5	95	nnw.	4.5	1,173	877.4	−12.0	0.84	100	2.17	nnw.	13.6		
						1,250	868.7	−12.2		100	2.13	nnw.	13.3	1,600	
						1,500	841.0	−13.0		99	1.96	nnw.	12.2		10/10 St.Cu., nnw.
8:50	970.3	−5.6	95	nnw.	4.9	1,654	824.1	−13.5	0.31	98	1.85	nnw.	11.6	3,000	
						1,750	814.0	−14.0		95	1.72	nnw.	12.8		
						2,000	787.9	−15.3		86	1.38	nnw.	15.8		
9:06	970.4	−5.6	95	wnw.	4.9	2,099	777.3	−15.8	0.52	83	1.27	nnw.	17.0		
						2,250	762.0	−16.9		86	1.19	nnw.	16.7	5,500	
						2,500	737.0	−18.8		91	1.05	nnw.	16.3		
9:22	970.7	−5.5	92	nnw.	3.6	2,742	713.4	−20.6	0.74	96	0.93	nnw.	15.8	6,100	
						2,500	737.0	−18.8		93	1.07	nnw.	14.9		
						2,250	762.0	−16.9		90	1.21	nnw.	13.9	4,500	
						2,000	787.9	−15.1		87	1.42	nnw.	13.0	4,100	
10:09	971.5	−5.5	87	nnw.	6.7	1,855	803.5	−14.0	−0.90	85	1.54	nnw.	12.4	3,250	
10:23	971.7	−6.0	89	n.	5.8	1,822	807.1	−14.3	0.40	97	1.71	nnw.	12.9		6/10 St.Cu., nnw. (upper); 4/10 St.Cu., nnw. (lower).
						1,750	815.0	−14.0		96	1.74	nnw.	13.0		
						1,500	842.5	−13.0		93	1.84	n.	13.3	3,000	Altitude of St.Cu. base (lower) about 1,450 m.
10:45	972.1	−5.7	88	n.	5.8	1,366	857.4	−12.5	0.49	91	1.88	n.	13.4		
						1,250	870.9	−11.9		92	2.01	n.	13.2		
						1,000	899.7	−10.7		96	2.34	n.	12.9	1,600	
11:05	972.3	−5.9	83	n.	5.4	810	922.0	− 9.8	0.99	98	2.59	n.	12.6	0	
						750	929.7	− 9.2		96	2.68	n.	11.8		
						500	959.9	− 6.7		87	3.02	n.	8.2		
11:14	972.2	−5.7	83	n.	6.7	396	972.2	− 5.7		83	3.14	n.	6.7		4/10 St.Cu., nnw.

December 28, 1918.

A. M.															
8:12	969.9	−6.2	89	nw.	4.0	396	969.9	− 6.2		89	3.22	nw.	4.0		8/10 St.Cu., nnw.; 2/10 St., nnw.
						500	957.5	− 5.7		92	3.48	nw.	4.8		
8:30	969.9	−5.5	90	nw.	3.6	702	932.9	− 4.8	−0.46	97	3.96	nnw.	6.3	0	
						750	927.0	− 5.0		95	3.81	nnw.	7.3		Altitude of St. base about 800 m.
						1,000	897.8	− 6.1		86	3.15	nnw.	12.3		
8:42	969.9	−5.1	90	nnw.	3.1	1,155	880.4	− 6.8	0.44	81	2.79	nnw.	15.4	2,200	
						1,250	870.2	− 4.1		67	2.90	nnw.	16.1		
8:52	969.9	−5.0	90	nnw.	3.6	1,349	859.2	− 1.2	−2.89	53	2.93	nnw.	16.9	2,100	5/10 St.Cu., nnw.
9:03	969.9	−4.5	92	nnw.	4.0	1,419	851.7	− 0.9	−0.29	48	2.72	nnw.	19.9	2,400	5/10 St., nnw.
						1,250	870.2	− 1.0		49	2.75	nnw.	19.4	2,100	
9:13	970.1	−4.2	91	nnw.	4.5	1,214	874.2	− 1.2	−7.00	51	2.82	nnw.	17.2		
9:17	970.1	−4.0	91	nnw.	4.5	1,124	884.2	− 7.5	0.68	83	2.68	nnw.	17.2		
						1,000	898.2	− 6.8		86	2.96	nnw.		0	
						750	927.8	− 5.0		91	3.65	nnw.			Altitude of St. base about 850 m.
10:02	970.6	−2.8	87	nnw.	2.7	665	938.1	− 4.4	0.55	93	3.92	nnw.			
						500	958.3	− 3.5		91	4.15	nnw.			
10:09	970.6	−2.8	89	nnw.	1.8	396	970.6	− 2.8		89	4.31	nnw.	1.8		6/10 St.Cu., nnw.; 4/10 St., nnw.

TABLE 10.—*Free-air data from kite flights at Drexel Aerological Station, December, 1918*—Continued.

December 29, 1918.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Electric potential.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	*Volts.*	
7:27	963.0	−5.4	100	ene.	2.7	396	963.0	−5.4		100	3.88	ene.	2.7		Few A.Cu., wnw.
7:30	963.0	−5.4	100	ene.	2.7	485	952.2	0.0	−6.07	73	4.46	e.	7.0		
						500	950.6	0.2		72	4.46	e.	7.0		
7:58	962.8	−6.0	100	e.	4.5	708	925.9	3.1	−1.39	58	4.43	ese.	6.4		
						750	921.3	3.3		57	4.41	ese.	6.2	330	Few A.Cu., wnw.
						1,000	893.7	4.3		52	4.32	se.	5.2	620	
9:54	962.6	−0.9	84	e.	6.7	1,224	869.5	5.2	−0.33	48	4.25	sse.	4.3		Cloudless.
						1,000	893.7	4.6		51	4.32	se.	7.2	560	Light smoke.
						750	921.3	4.0		55	4.47	ese.	10.4		
10:20	962.5	−0.5	83	e.	5.8	708	925.9	3.9	−1.51	56	4.52	ese.	10.9	520	
						500	950.4	0.8		75	4.85	e.	7.5		
10:22	962.5	−0.8	84	e.	5.8	396	962.5	−0.8		84	4.80	e.	5.8		

December 30, 1918.

A. M.															
8:17	960.5	−3.2	96	nne.	3.6	396	960.5	−3.2		96	4.49	nne.	3.6		10/10 St., nne.
						500	948.4	−4.2		97	4.17	nne.	4.8		Altitude of St. base about 650 m.
8:35	960.6	−3.2	95	nne.	3.1	715	922.5	−6.2	0.94	100	3.62	nne.	7.4	0	
						750	918.9	−5.9		98	3.64	nne.	7.4	1,000	Light snow began at 9:06 a. m. and continued at end of flight.
						1,000	891.0	−4.0		87	3.80	nnw.	7.2		
10:33	962.0	−2.8	91	n.	3.6	1,062	883.9	−3.5	−0.78	84	3.83	nnw.	7.1	1,100	
						1,250	863.5	−4.8		87	3.55	nnw.	6.3	2,000	10/10 St., n.
						1,500	836.3	−6.6		92	3.22	nnw.	5.1		
10:44	962.0	−2.8	93	n.	3.6	1,674	817.7	−7.8	0.70	95	2.99	nnw.	4.3		
						1,500	836.3	−6.6		94	3.29	nnw.	5.3	1,300	
						1,250	863.5	−4.9		93	3.77	nnw.	6.9		
11:08	962.1	−2.5	95	nnw.	3.6	1,109	878.8	−3.9	−0.28	93	4.10	nnw.	7.7	1,000	10/10 St., nnw.
						1,000	891.0	−4.2		93	4.00	nnw.	7.7	980	
						750	919.5	−4.9		92	3.73	nnw.	7.9		
11:24	962.1	−2.5	94	nnw.	3.1	639	933.0	−5.2	1.20	92	3.62	nnw.	7.9	0	Altitude of St. base about 600 m.
						500	949.8	−3.6		93	4.20	nnw.	5.5		
11:27	962.1	−2.3	94	nnw.	3.6	396	962.1	−2.3		94	4.74	nnw.	3.6		10/10 St., nnw.

December 31, 1918.

A. M.															
8:05	972.0	−15.4	81	nnw.	3.6	396	972.0	−15.4		81	1.29	nw.	3.6		10/10 St.Cu., nne.; snow flurries at beginning and continued at end of flight.
						500	958.7	−16.4		82	1.19	nw.	6.3		
						750	927.4	−19.0		84	0.95	nnw.	12.7		
8:11	972.1	−15.4	81	n.	3.6	762	925.9	−19.1	1.01	84	0.94	nnw.	13.0	0	
8:24	972.1	−15.4	81	n.	3.6	960	901.5	−12.8	−3.13	96	1.94	n.	12.2		
						1,000	897.0	−12.9		95	1.90	n.	11.8	1,600	Altitude of St.Cu. base about 1,250 m.
						1,250	867.7	−13.8		95	1.73	n.	9.1	2,200	
						1,500	839.7	−14.6		94	1.61	nne.	6.4		
9:28	972.3	−16.4	88	n.	3.6	1,622	826.4	−15.0	0.34	94	1.55	nne.	5.1		
						1,500	839.7	−14.6		94	1.61	nne.	5.9		
						1,250	867.7	−13.8		93	1.71	n.	7.6	4,200	
						1,000	897.0	−12.9		92	1.84	n.	9.4		Altitude of St.Cu. base about 1,100 m.
10:12	972.1	−16.6	89	n.	3.1	994	897.6	−12.9	−2.89	92	1.84	n.	9.4	6,000	
10:19	972.0	−16.6	89	n.	3.1	748	927.2	−20.0	0.97	91	0.94	nnw.	11.6	4,800	
						500	958.7	−17.6		90	1.16	n.	5.6		
10:26	971.9	−16.6	89	n.	3.1	396	971.0	−16.6		89	1.26	n.	3.1		10/10 St.Cu., nne.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918.*

October 1, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:38	963.6	4.3	82	ssw.	4.5	444	963.6	4.3	.....	82	6.81	ssw.	4.5	9/10 St.Cu., nw.
						500	957.0	4.5	.....	82	6.90	ssw.	5.5	
						750	928.4	5.7	.....	80	7.33	sw.	10.1	
6:47	963.6	4.3	81	ssw.	5.8	914	909.8	6.4	−0.45	79	7.59	sw.	13.1	
						1,000	900.1	6.5	.....	77	7.45	sw.	13.3	
						1,250	873.0	6.7	.....	72	7.06	ssw.	13.8	
7:01	963.5	4.1	82	ssw.	5.4	1,472	843.8	6.9	−0.09	68	6.77	ssw.	14.2	
						1,500	845.7	6.9	.....	68	6.77	ssw.	14.1	
						1,750	821.3	6.5	.....	64	6.20	sw.	13.5	
7:30	963.1	5.2	80	ssw.	6.3	1,992	797.6	6.2	0.13	60	5.69	wsw.	12.8	
						2,000	796.6	6.2	.....	60	5.69	wsw.	12.8	
						2,250	772.5	5.0	.....	54	4.71	wsw.	13.2	
						2,500	749.0	3.8	.....	48	3.85	w.	13.5	
						2,750	726.5	2.6	.....	42	3.10	w.	13.9	
						3,000	704.5	1.4	.....	36	2.43	wnw.	14.3	Few St.Cu., nw.
9:00	962.5	9.4	72	ssw.	10.7	3,096	696.5	0.9	0.48	34	2.22	wnw.	14.4	
						3,250	683.0	− 0.2	.....	37	2.22	wnw.	14.3	
						3,500	662.0	− 2.0	.....	41	2.12	wnw.	14.2	
						3,750	641.7	− 3.8	.....	45	2.00	wnw	14.1	
						4,000	621.4	− 5.6	.....	50	1.90	wnw.	14.0	
9:41	962.0	11.0	68	ssw.	8.5	4,133	610.7	− 6.6	0.70	52	1.82	wnw.	13.9	
						4,000	621.4	− 5.7	.....	50	1.89	wnw.	13.7	
						3,750	641.7	− 4.0	.....	47	2.05	wnw.	13.3	
						3,500	662.0	− 2.2	.....	44	2.24	wnw.	12.8	
						3,250	683.0	− 0.5	.....	40	2.34	w.	12.4	
						3,000	704.5	1.2	.....	37	2.46	w	12.0	
						2,750	726.5	2.9	.....	34	2.56	w.	11.6	
10:17	961.7	13.8	62	sw.	6.7	2,709	730.2	3.2	0.38	33	2.54	w.	11.5	
						2,500	749.0	4.0	.....	42	3.41	w.	11.6	
						2,250	772.5	5.0	.....	52	4.53	w.	11.7	
						2,000	796.6	5.9	.....	63	5.85	wsw.	11.7	
						1,750	821.3	6.9	.....	73	7.26	wsw.	11.8	
10:39	961.6	15.5	58	sw.	7.2	1,609	835.9	7.4	0.40	79	8.14	wsw.	11.9	
						1,500	848.7	7.8	.....	78	8.25	wsw.	11.3	
						1,250	873.0	8.8	.....	75	8.50	wsw.	9.8	
						1,000	899.8	9.8	.....	73	8.85	sw.	8.3	
10:50	961.6	15.5	58	sw.	7.6	803	921.2	10.6	1.50	71	9.07	sw.	7.2	
						750	927.2	11.4	.....	69	9.30	sw.	7.2	
						500	955.5	15.2	.....	57	9.84	sw.	7.5	
10:55	961.5	16.0	54	sw.	7.6	444	961.5	16.0	.....	54	9.82	sw.	7.6	Few St.Cu., nw.

October 2, 1918.

A. M.														
6:37	973.0	4.1	48	ne.	4.5	444	973.0	4.1	.....	48	3.93	ne.	4.5	10/10 St., wnw.
						500	964.5	3.6	.....	48	3.80	ne.	4.5	
						750	937.0	1.3	.....	50	3.36	nne.	4.5	
6:57	973.3	3.9	50	ne.	4.0	844	926.2	0.5	0.90	51	3.23	nne.	4.5	
						1,000	906.2	0.3	.....	53	3.31	nne.	5.3	
7:53	973.3	3.9	48	nne.	3.6	1,219	885.0	0.1	0.10	55	3.38	nne.	6.3	
						1,000	908.2	0.3	.....	55	3.49	nne.	5.6	
						750	937.0	0.5	.....	58	3.67	nne.	4.8	
8:38	973.3	4.4	52	nne.	3.6	704	942.5	0.5	1.50	58	3.67	nne.	4.6	
						500	964.5	3.5	.....	53	4.16	nne.	3.4	
8:48	973.3	4.4	52	nne	3.1	444	973.3	4.4	.....	52	4.35	nne.	3.1	10/10 St., wnw.

October 3, 1918.

A. M.														
6:38	972.4	0.0	78	s.	6.7	444	972.4	0.0	.....	78	4.77	s.	6.7	Few A.Cu., wsw.
						500	965.8	1.1	.....	75	4.96	s.	8.0	
						750	936.4	6.4	.....	63	6.06	ssw.	14.0	
6:43	972.4	0.4	78	s.	6.7	849	925.2	8.5	−2.10	58	6.44	ssw.	16.3	
						1,000	908.0	8.9	.....	62	7.07	ssw.	14.9	
						1,250	881.3	9.7	.....	67	8.06	sw.	12.5	
7:00	972.3	0.0	78	s.	6.7	1,363	869.4	10.0	−0.29	70	8.60	sw.	11.4	
						1,500	855.5	9.0	.....	75	8.61	sw.	11.4	
						1,750	829.6	7.2	.....	83	8.43	wsw.	11.2	
7:13	972.2	0.0	78	s.	7.2	1,833	821.3	6.6	0.72	86	8.38	wsw.	11.2	
						2,000	804.0	5.6	.....	82	7.46	wsw.	11.2	
						2,250	779.5	4.2	.....	76	6.27	wsw.	11.2	
						2,500	755.8	2.7	.....	69	5.12	wsw.	11.2	
						2,750	733.2	1.2	.....	63	4.20	w.	11.2	
						3,000	711.2	− 0.2	.....	57	3.43	w.	11.2	
7:47	972.1	1.5	75	s.	5.4	3,028	709.0	− 0.4	0.59	56	3.31	w.	11.2	
						3,250	690.0	− 0.8	.....	50	2.86	w.	11.8	
						3,500	669.4	− 1.3	.....	44	2.41	w.	12.4	
						3,750	649.4	− 1.8	.....	37	1.95	w.	13.0	
8:46	971.2	7.9	44	s.	7.2	3,983	630.8	− 2.2	0.19	31	1.58	w.	13.6	2/10 St.Cu., wsw.
						4,000	629.5	− 2.4	.....	31	1.55	w.	13.6	
						4,250	609.8	− 4.6	.....	29	1.20	w.	13.6	
						4,500	590.2	− 6.9	.....	27	0.92	w.	13.6	
						4,750	571.0	− 9.2	.....	25	0.70	w.	13.6	
						5,000	551.4	−11.4	.....	23	0.53	w.	13.6	
9:11	970.8	8.7	42	s.	9.4	5,028	549.8	−11.7	0.94	23	0.51	w.	13.6	
						5,000	551.2	−11.4	.....	23	0.53	w.	13.6	
						4,750	569.4	− 9.0	.....	22	0.62	w.	13.3	
						4,500	587.9	− 6.5	.....	21	0.74	w.	13.0	
						4,250	607.0	− 4.1	.....	20	0.87	w.	12.7	
9:41	970.5	10.0	40	s.	10.7	4,201	610.2	− 3.6	0.36	20	0.90	w.	12.6	
						4,000	626.5	− 2.9	.....	18	0.86	w.	12.0	
						3,750	646.8	− 2.0	.....	16	0.83	w.	11.3	

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October, 3, 1918—Continued.

Surface.						At different heights above sea.								Remarks
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
10:14	970.1	12.2	36	s.	11.2	3,568	661.5	− 1.3	1.38	15	0.82	w.	10.8	
						3,500	667.0	− 2.2		15	0.76	w.	11.5	
10:17	970.1	12.2	36	s.	11.2	3,430	673.0	− 3.2	0.74	16	0.75	w.	12.2	
						3,250	688.2	− 1.9		27	1.41	w.	11.9	
						3,000	710.1	0.0		42	2.57	wsw.	11.4	
						2,750	732.6	1.8		58	4.07	wsw.	11.0	
						2,500	755.8	3.7		73	5.81	sw.	10.6	
10:43	969.8	13.4	35	s.	9.8	2,293	775.8	5.2	0.57	80	7.61	sw.	10.2	
						2,250	779.5	5.4		86	7.71	sw.	10.5	
						2,000	804.0	6.8		80	7.90	sw.	12.5	
						1,750	828.8	8.3		78	8.54	sw.	14.4	
						1,500	854.5	10.0		75	9.21	sw.	16.4	
						1,250	880.3	11.1		72	9.45	sw.	18.4	
10:58	969.6	13.5	37	s.	11.2	1,141	891.4	11.7	−0.88	70	9.62	sw.	19.2	
						1,000	906.9	10.4		68	8.57	sw.	17.0	
11:13	969.4	14.5	34	s.	11.2	849	923.6	9.1	1.31	66	7.63	sw.	14.6	
						750	934.6	10.4		58	7.31	sw.	13.8	
						500	963.0	14.2		34	5.50	s.	11.7	
11:20	969.3	14.4	33	s.	11.2	444	969.3	14.4		33	5.41	s.	11.2	1/10 St.Cu., wsw.

October 4, 1918.

P. M.														
2:36	951.1	26.6	36	wnw.	8.0	444	951.1	26.6		36	12.54	wnw.	8.0	8/10 Ci.St., sw.; 1/10 Cu., wnw.
						500	945.0	25.8		37	12.30	wnw.	8.3	
						750	918.0	22.4		39	10.57	wnw.	9.6	
2:50	951.1	26.4	36	nw.	9.4	815	911.6	21.5	1.37	40	10.26	wnw.	9.9	
						1,000	891.9	19.6		44	10.04	wnw.	9.1	
3:09	951.0	26.4	37	wnw.	6.7	1,250	866.2	17.0		49	9.50	wnw.	7.9	
						1,447	846.7	15.0	1.03	53	9.04	wnw.	7.0	Faint solar halo, 22° radius, from 3:00 to 3:15 p. m.
						1,500	841.3	14.6		53	8.81	wnw.	7.4	
						1,750	816.3	12.8		53	7.83	wnw.	9.6	
						2,000	792.3	10.9		54	7.04	wnw.	11.7	
3:40	950.7	25.8	39	wnw.	6.7	2,233	770.3	9.2	0.74	54	6.29	wnw.	13.7	
						2,250	768.8	9.0		54	6.20	wnw.	13.7	
						2,500	745.6	6.8		57	5.63	wnw.	14.0	
						2,750	723.3	4.6		60	5.09	wnw.	14.3	
						3,000	701.0	2.2		63	4.51	wnw.	14.6	
4:14	950.7	24.8	39	wnw.	8.0	3,056	696.2	1.8	0.80	64	4.45	wnw.	14.7	7/10 Ci.St., sw.; 2/10 A.Cu., wnw.
						3,000	701.0	2.2		64	4.58	wnw.	14.6	
						2,750	723.3	4.0		62	5.04	wnw.	14.0	
						2,500	745.6	5.7		61	5.59	nw.	13.3	
						2,250	768.4	7.5		59	6.12	nw.	12.7	
4:30	951.0	24.0	40	wnw.	7.6	2,069	785.3	8.8	0.84	58	6.57	nw.	12.3	
						2,000	791.7	9.4		58	6.84	nw.	12.3	
						1,750	815.7	11.5		58	7.87	nw.	12.3	
						1,500	840.5	13.6		58	9.01	nw.	12.3	
4:40	951.0	23.9	39	wnw.	8.9	1,440	846.7	14.1	0.91	58	9.33	nw.	12.3	
						1,250	865.8	15.8		55	9.87	nw.	11.6	
						1,000	891.9	18.1		51	10.59	nw.	10.6	
5:21	951.1	23.9	39	nw.	7.2	966	895.5	18.4	0.92	50	10.58	nw.	10.5	
						750	918.0	20.4		46	11.05	nw.	9.3	
						500	945.0	22.7		42	11.59	nw.	7.9	
5:28	951.1	23.2	41	nw.	7.6	444	951.1	23.2		41	11.66	nw.	7.6	3/10 A.Cu., wsw.; 4/10 St.Cu., wnw.

October 5, 1918 (No. 1).

A. M.														
7:10	957.4	10.5	72	w.	8.0	444	957.4	10.5		72	9.14	w.	8.0	Cloudless.
						500	951.2	10.9		70	9.13	w.	9.4	
						750	923.3	12.7		60	8.81	wnw.	16.0	
7:15	957.5	10.5	72	w.	7.6	921	901.4	14.0	−0.73	53	8.47	nw.	20.4	
						1,000	895.9	13.6		53	8.26	nw.	20.6	
						1,250	869.5	12.1		51	7.20	nw.	21.4	
7:29	957.5	10.5	72	w.	6.3	1,318	862.7	11.7	0.58	51	7.01	nw.	21.6	
						1,500	843.9	10.3		52	6.52	nw.	22.4	
						1,750	818.7	8.4		53	5.84	nw.	23.6	
7:40	957.6	10.8	72	w.	5.8	1,935	800.5	7.0	0.74	54	5.41	nw.	21.5	
						1,750	818.7	8.3		53	5.80	nw.	22.7	
						1,500	843.9	10.1		52	6.43	nw.	20.2	
7:59	957.7	11.2	70	w.	5.8	1,281	875.9	11.7	−0.96	51	7.01	nw.	18.0	
						1,250	869.5	11.4		54	7.28	nw.	18.1	
						1,000	895.9	9.0		76	8.72	nw.	19.3	
8:14	957.8	12.0	68	wnw.	5.8	936	902.8	8.4	0.73	82	9.01	nw.	19.6	
						750	923.3	9.8		77	9.33	nw.	14.6	
						500	951.2	11.6		70	9.56	wnw.	7.8	
8:21	957.8	12.0	68	wnw.	6.3	444	957.8	12.0		68	9.54	wnw.	6.3	Cloudless.

October 5, 1918 (No. 2).

P. M.														
2:28	959.4	15.9	54	nnw.	8.0	444	959.4	15.9		54	9.76	nnw.	8.0	2/10 Ci.St., wnw
						500	953.0	15.2		56	9.67	nnw.	8.1	
						750	925.0	12.2		64	9.09	nnw.	8.5	
2:44	959.4	16.0	52	nnw.	7.6	981	900.0	9.4	1.21	72	8.49	nnw.	8.9	
						1,000	898.0	9.4		72	8.49	nnw.	9.0	
						1,250	871.5	8.6		69	7.71	nnw.	10.3	
						1,500	845.5	7.8		66	6.98	nnw.	11.5	

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 5, 1918 (No. 2)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
3:07	959.5	15.8	54	nnw.	8.9	1,672	827.7	7.2	0.32	64	6.50	nnw.	12.4	
						1,750	820.0	6.8		59	5.83	nnw.	12.6	
						2,000	795.1	5.5		42	3.79	nnw.	13.4	
3:38	959.8	15.6	55	nnw.	8.9	2,140	781.8	4.8	0.51	33	2.84	nnw.	13.9	
						2,250	771.5	4.3		32	2.66	nnw.	14.5	
						2,500	748.4	3.2		30	2.31	nnw.	15.8	
						2,750	726.0	2.0		27	1.91	nnw.	17.1	
						3,000	704.0	0.9		25	1.63	nnw.	18.4	
						3,250	682.3	− 0.2		23	1.38	nnw.	19.6	
						3,500	661.0	− 1.4		20	1.09	nnw.	21.0	
						3,750	641.0	− 2.5		18	0.89	nnw.	22.3	
4:13	960.1	15.3	53	nnw.	9.4	3,928	625.9	− 3.3	0.44	16	0.74	nnw.	23.2	5/10 Ci.St., wnw.
						3,750	643.0	− 2.6		16	0.79	nnw.	22.4	
						3,500	661.0	− 1.5		16	0.86	nnw.	21.2	
						3,250	682.3	− 0.5		15	0.88	nnw.	20.1	
						3,000	704.0	0.6		15	0.96	nnw.	19.0	
						2,750	726.0	1.6		15	1.03	nw.	17.8	
						2,500	748.4	2.7		14	1.04	nw.	16.7	
5:24	960.4	13.2	59	nnw.	6.7	2,347	762.3	3.3	0.60	14	1.08	nw.	16.0	
						2,250	771.5	4.1		15	1.23	nw.	15.5	
						2,000	795.1	5.4		18	1.61	nw.	14.1	
						1,750	820.0	6.9		20	1.99	nw.	12.6	
5:39	960.6	12.2	66	nnw.	7.6	1,599	835.4	7.8	0.04	22	2.33	nw.	11.8	
						1,500	845.5	7.8		28	2.96	nw.	11.5	
						1,250	871.5	8.0		43	4.61	nnw.	10.6	
						1,000	898.5	8.1		58	6.26	n.	9.8	
5:51	960.7	12.0	64	nnw.	7.2	927	906.5	8.1	0.70	62	6.70	n.	9.5	
						750	926.0	9.3		64	7.50	nnw.	8.5	
						500	954.5	11.1		68	8.98	nw.	7.0	
5:59	960.8	11.5	69	nnw.	6.7	444	960.8	11.5		69	9.36	nw.	6.7	Few Ci.; 4/10 St.Cu.
October 6, 1918.														
A. M.														
8:21	964.4	6.8	90	e.	5.8	444	964.4	6.8		90	8.89	e.	5.8	10/10 St., ese.
						500	958.0	6.2		91	8.63	e.	5.8	Altitude of St. base about 700 m.
						750	929.0	3.7		96	7.64	ese.	5.9	
8:57	964.5	6.7	87	ese.	5.8	877	914.5	2.4	1.02	99	7.19	ese.	5.9	
						1,000	900.7	7.9		69	7.35	ese.	5.7	
9:02	964.5	6.7	87	ese.	5.8	1,022	898.4	8.9	−4.48	63	7.18	ese.	5.6	
						1,250	873.8	10.1		51	6.30	ese.	4.9	
						1,500	848.3	11.3		37	4.95	ese.	4.1	
10:12	964.6	7.2	86	ese.	6.7	1,594	838.9	11.8	−0.44	32	4.43	ese.	3.8	
						1,500	848.3	11.4		36	4.85	ese.	4.3	
						1,250	874.0	10.5		47	5.97	ese.	5.6	
10:26	964.6	7.3	80	ese.	6.3	1,143	885.7	10.1	−2.07	52	6.43	ese.	6.2	
						1,000	901.0	7.1		71	7.16	ese.	6.1	
10:32	964.7	7.6	81	ese.	6.7	809	922.6	3.2	1.21	96	7.38	ese.	6.0	Altitude of St. base about 800 m.
						750	929.0	3.9		94	7.60	ese.	6.1	
						500	958.0	7.4		81	8.34	ese.	6.7	
10:43	964.7	7.6	80	ese.	6.7	444	964.7	7.6		80	8.35	ese.	6.7	10/10 St., ese.
October 7, 1918.														
A. M.														
6:35	960.5	10.8	78	sw.	6.3	444	960.5	10.8		78	10.10	sw.	6.3	3/10 A.Cu., sw.
						500	954.1	10.7		78	10.04	sw.	7.5	
						750	925.9	10.2		77	9.59	w.	8.9	
6:49	960.6	10.7	80	sw.	6.3	824	917.7	10.1	0.18	77	9.52	w.	9.5	
						1,000	898.1	9.6		76	9.08	w.	8.5	
						1,250	871.7	9.0		74	8.50	wnw.	7.1	
7:14	961.0	9.8	79	sw.	4.9	1,394	857.0	8.6	0.26	73	8.15	wnw.	6.3	
						1,500	846.6	8.2		73	7.94	wnw.	7.3	
						1,750	821.5	7.4		71	7.31	wnw.	8.5	
						2,000	797.0	6.5		70	6.78	w.	11.7	
						2,250	773.4	5.6		70	6.37	w.	14.1	
						2,500	750.3	4.7		69	5.89	wsw.	16.2	
8:36	962.2	13.0	70	w.	5.4	2,651	736.7	4.2	0.35	68	5.61	wsw.	17.6	2/10 Ci.St., w.; 5/10 St.Cu., sw.
						2,750	728.0	3.7		69	5.49	wsw.	18.0	
						3,000	705.9	2.4		73	5.30	wsw.	19.0	
						3,250	684.5	1.0		77	5.06	wsw.	20.0	
						3,500	663.4	− 0.3		81	4.83	wsw.	21.0	
8:42	962.3	13.2	68	wnw.	6.3	3,715	645.2	− 1.4	0.51	84	4.57	wsw.	21.8	
						3,500	663.4	− 0.3		82	4.89	wsw.	21.2	
						3,250	684.5	0.9		80	5.22	wsw.	20.6	
						3,000	705.5	2.1		78	5.55	sw.	20.0	
9:25	962.6	14.1	62	wnw.	6.3	2,745	720.3	3.3	0.35	76	5.88	sw.	19.4	
						2,750	727.6	3.3		76	5.88	sw.	19.3	
						2,500	750.3	4.2		72	5.94	sw.	18.2	
						2,250	773.9	5.1		68	5.98	sw.	17.0	
9:41	962.7	14.3	59	wnw.	5.8	2,216	777.1	5.2	0.41	67	5.93	sw.	16.8	
						2,000	798.0	6.1		66	6.22	wsw.	13.7	
						1,750	822.7	7.1		65	6.56	wsw.	10.0	
9:59	962.8	15.2	58	nw.	5.4	1,533	844.5	8.0	0.46	64	6.87	w.	6.9	
						1,500	848.0	8.1		64	6.91	w.	6.9	
						1,250	874.0	9.3		64	7.50	wnw.	6.9	
						1,000	901.0	10.4		64	8.07	wnw.	6.8	
10:22	962.9	16.8	51	nw.	6.3	789	924.2	11.4	1.33	64	8.63	nw.	6.8	
						750	928.0	11.9		63	8.78	nw.	6.7	
						500	958.0	15.2		54	9.33	nw.	6.4	
10:29	962.9	16.0	52	nw.	6.3	444	962.9	16.0		52	9.52	nw.	6.3	8/10 St.Cu., sw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 8, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:45	971.5	4.4	68	w.	3.6	444	971.5	4.4	.....	68	5.69	w.	3.6	Few A.Cu., w.
.....	.....	.....	.....	.....	.....	500	965.5	5.1	.....	66	5.80	w.	4.6	
.....	.....	.....	.....	.....	.....	750	936.2	7.7	.....	59	6.20	wnw.	8.3	
6:57	971.6	4.2	71	w.	5.4	982	910.0	10.2	−1.08	52	6.47	wnw.	11.9	
.....	.....	.....	.....	.....	.....	1,000	908.0	10.1	.....	52	6.43	wnw.	11.9	
.....	.....	.....	.....	.....	.....	1,250	880.5	8.0	.....	50	5.36	wnw.	12.2	
.....	.....	.....	.....	.....	.....	1,500	854.2	6.0	.....	48	4.49	wnw.	12.5	
7:22	971.7	5.8	65	w.	3.6	1,722	831.8	4.2	0.81	47	3.88	wnw.	12.8	
.....	.....	.....	.....	.....	.....	1,750	829.0	4.0	.....	47	3.82	wnw.	12.9	
.....	.....	.....	.....	.....	.....	2,000	804.1	1.7	.....	49	3.39	wnw.	14.0	
.....	.....	.....	.....	.....	.....	2,250	779.7	− 0.6	.....	51	2.96	wnw.	15.1	
.....	.....	.....	.....	.....	.....	2,500	756.0	− 2.9	.....	53	2.54	wnw.	16.2	
.....	.....	.....	.....	.....	.....	2,750	732.2	− 5.2	.....	55	2.17	wnw.	17.3	
7:54	972.0	7.0	63	wnw.	1.8	2,822	725.2	− 5.8	0.91	56	2.10	wnw.	17.6	
8:00	972.0	7.8	60	wnw.	1.8	3,000	709.0	− 5.5	.....	48	1.84	wnw.	19.1	
.....	.....	.....	.....	.....	.....	3,128	697.5	− 5.2	−0.20	42	1.65	wnw.	20.2	
.....	.....	.....	.....	.....	.....	3,250	686.5	− 6.2	.....	41	1.48	wnw.	20.2	
.....	.....	.....	.....	.....	.....	3,500	664.8	− 8.1	.....	39	1.20	wnw.	20.1	
.....	.....	.....	.....	.....	.....	3,750	643.6	−10.1	.....	38	0.98	wnw.	20.0	
.....	.....	.....	.....	.....	.....	4,000	623.2	−12.0	.....	36	0.78	wnw.	19.9	
.....	.....	.....	.....	.....	.....	4,250	603.3	−14.0	.....	34	0.62	wnw.	19.8	
8:42	972.0	10.9	52	w.	1.3	4,380	593.1	−15.0	0.74	33	0.54	wnw.	19.8	
.....	.....	.....	.....	.....	.....	4,250	603.3	−14.1	.....	33	0.59	wnw.	19.5	Cloudless.
.....	.....	.....	.....	.....	.....	4,000	623.2	−12.3	.....	33	0.70	wnw.	18.8	
.....	.....	.....	.....	.....	.....	3,750	643.6	−11.6	.....	33	0.74	wnw.	18.2	
.....	.....	.....	.....	.....	.....	3,500	664.5	− 8.8	.....	33	0.95	wnw.	17.6	
.....	.....	.....	.....	.....	.....	3,250	686.1	− 7.1	.....	33	1.11	wnw.	16.9	
9:50	971.4	14.0	48	w.	2.7	3,103	699.0	− 6.2	−0.32	33	1.19	wnw.	16.6	
.....	.....	.....	.....	.....	.....	3,000	708.4	− 6.5	.....	34	1.20	wnw.	16.2	
9:54	971.4	14.3	46	w.	2.7	2,883	719.4	− 6.9	0.86	35	1.19	wnw.	15.7	
.....	.....	.....	.....	.....	.....	2,750	731.5	− 5.8	.....	37	1.39	wnw.	15.5	
.....	.....	.....	.....	.....	.....	2,500	755.3	− 3.6	.....	41	1.85	wnw.	15.2	
.....	.....	.....	.....	.....	.....	2,250	779.0	− 1.5	.....	45	2.43	wnw.	14.9	
.....	.....	.....	.....	.....	.....	2,000	803.8	0.7	.....	50	3.22	wnw.	14.6	
.....	.....	.....	.....	.....	.....	1,750	829.0	2.9	.....	54	4.07	wnw.	14.3	
10:19	970.9	14.6	44	w.	3.1	1,617	842.5	4.0	0.75	56	4.55	wnw.	14.1	
.....	.....	.....	.....	.....	.....	1,500	854.2	4.9	.....	56	4.85	wnw.	12.2	
.....	.....	.....	.....	.....	.....	1,250	881.0	6.8	.....	57	5.63	wnw.	8.0	
10:30	970.6	15.2	44	w.	2.7	1,057	902.0	8.2	1.17	58	6.30	wnw.	4.8	
.....	.....	.....	.....	.....	.....	1,000	908.3	8.9	.....	56	6.38	wnw.	4.6	
.....	.....	.....	.....	.....	.....	750	936.2	11.8	.....	50	6.92	wnw.	3.5	
.....	.....	.....	.....	.....	.....	500	964.0	14.7	.....	44	7.36	w.	2.4	
10:39	970.4	15.4	42	w.	2.2	444	970.4	15.4	.....	42	7.35	w.	2.2	Cloudless.

October 10, 1918.

A. M.														
6:50	960.7	3.8	57	n.	5.4	444	960.7	3.8	.....	57	4.57	n.	5.4	Few Cl.St., w.
.....	.....	.....	.....	.....	.....	500	954.3	5.3	.....	54	4.81	n.	5.7	
.....	.....	.....	.....	.....	.....	750	926.0	12.2	.....	41	5.83	nne.	7.2	
6:56	960.8	4.0	57	n.	4.9	883	911.1	15.8	−2.73	34	6.10	nne.	8.0	
.....	.....	.....	.....	.....	.....	1,000	898.5	15.3	.....	33	5.74	nne.	5.9	
.....	.....	.....	.....	.....	.....	1,250	873.2	14.2	.....	30	4.86	nne.	1.4	
8:42	961.7	11.4	36	n.	3.1	1,319	866.8	13.9	0.42	29	4.61	nne.	0.2	
.....	.....	.....	.....	.....	.....	1,250	873.6	14.2	.....	29	4.70	nne.	0.9	
.....	.....	.....	.....	.....	.....	1,000	900.3	15.2	.....	29	5.01	ne.	3.3	
9:07	961.9	12.9	34	ne.	3.6	840	917.6	15.8	−2.02	29	5.21	ne.	4.8	
.....	.....	.....	.....	.....	.....	750	927.5	14.0	.....	30	4.79	ne.	4.4	
9:09	961.9	13.0	34	ne.	3.6	662	937.2	12.2	0.55	30	4.26	ne.	4.1	
.....	.....	.....	.....	.....	.....	500	955.6	13.1	.....	32	4.83	nne.	3.4	
9:14	961.9	13.4	33	nne.	3.1	444	961.9	13.4	.....	33	5.07	nne.	3.1	1/10 Cl.St., w.

October 11, 1918 (No. 1).

A. M.														
6:54	960.1	12.0	49	ssw.	3.1	444	960.1	12.0	.....	49	6.87	ssw.	3.1	10/10 St., wnw.
.....	.....	.....	.....	.....	.....	500	954.0	12.8	.....	47	6.95	ssw.	4.4	
.....	.....	.....	.....	.....	.....	750	926.5	16.2	.....	39	7.18	sw.	10.3	
6:57	960.1	12.1	48	ssw.	3.1	919	907.8	18.6	−1.39	34	7.29	w.	14.4	
.....	.....	.....	.....	.....	.....	1,000	898.9	18.0	.....	34	7.02	w.	14.0	
.....	.....	.....	.....	.....	.....	1,250	872.9	16.1	.....	34	6.22	w.	12.6	
.....	.....	.....	.....	.....	.....	1,500	848.0	14.2	.....	33	5.34	wsw.	11.3	
7:26	960.1	11.7	49	ssw.	3.6	1,720	825.8	12.6	0.75	33	4.81	wsw.	10.1	
.....	.....	.....	.....	.....	.....	1,750	823.5	12.3	.....	33	4.72	wsw.	10.2	
.....	.....	.....	.....	.....	.....	2,000	799.3	10.0	.....	38	4.67	wsw.	10.8	
.....	.....	.....	.....	.....	.....	2,250	775.0	7.8	.....	42	4.44	wsw.	11.5	
.....	.....	.....	.....	.....	.....	2,500	751.7	5.5	.....	47	4.24	wsw.	12.1	
.....	.....	.....	.....	.....	.....	2,750	729.0	3.2	.....	51	3.92	wsw.	12.7	
.....	.....	.....	.....	.....	.....	3,000	707.0	0.9	.....	56	3.65	wsw.	13.4	9/10 A.Cu., wnw.
7:56	960.1	12.5	46	ssw.	3.6	3,012	705.5	0.8	0.91	56	3.62	wsw.	13.4	
.....	.....	.....	.....	.....	.....	3,250	685.1	− 1.6	.....	68	3.64	wsw.	13.4	
.....	.....	.....	.....	.....	.....	3,500	663.8	− 4.1	.....	81	3.51	wsw.	13.4	
8:11	960.1	13.0	46	ssw.	2.2	3,521	662.1	− 4.3	1.00	82	3.49	wsw.	13.4	
.....	.....	.....	.....	.....	.....	3,750	643.0	− 3.8	.....	63	2.80	w.	14.1	
8:24	960.1	13.8	43	ssw.	2.2	3,831	636.5	− 3.6	−2.26	56	2.53	w.	14.3	
.....	.....	.....	.....	.....	.....	4,000	623.8	− 4.8	.....	58	2.37	w.	14.6	
.....	.....	.....	.....	.....	.....	4,250	603.7	− 6.7	.....	62	2.15	w.	15.0	
.....	.....	.....	.....	.....	.....	4,500	584.4	− 8.5	.....	66	1.95	w.	15.4	
.....	.....	.....	.....	.....	.....	4,750	565.8	−10.3	.....	70	1.77	wnw.	15.8	
.....	.....	.....	.....	.....	.....	5,000	548.0	−12.2	.....	74	1.58	wnw.	16.3	4/10 Cl.St., wnw.; 4/10 Cl.Cu., wnw.
.....	.....	.....	.....	.....	.....	5,250	530.2	−14.0	.....	78	1.44	wnw.	16.7	

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 11, 1918 (No. 1)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:28	960.1	19.8	30	ssw.	1.3	5,319	525.8	−14.5	0.78	79	1.37	wnw.	16.8	
						5,250	530.2	−13.9		78	1.43	wnw.	16.6	
						5,000	548.0	−11.9		75	1.64	wnw.	16.0	
						4,750	566.4	− 9.9		72	1.89	wnw.	15.3	
10:19	960.1	22.4	27	wnw.	4.5	4,498	585.6	− 7.8	0.90	69	2.17	wnw.	14.6	
						4,250	604.5	− 5.6		63	2.40	wnw.	14.2	
						4,000	623.0	− 3.3		57	2.64	wnw.	13.8	
						3,750	643.8	− 1.3		51	2.79	wnw.	13.4	
10:51	960.1	23.8	26	wnw.	7.2	3,700	647.7	− 0.6	−0.40	50	2.90	wnw.	13.3	
10:55	960.1	23.8	26	wnw.	8.0	3,500	664.2	− 1.4		55	2.99	w.	11.1	
						3,476	666.4	− 1.5	0.79	56	3.02	w.	10.8	
						3,250	685.1	0.1		54	3.32	w.	10.6	
						3,000	707.0	1.8		51	3.55	w.	10.4	
						2,750	729.0	3.5		50	3.92	w.	10.1	
						2,500	751.7	5.2		48	4.25	w.	9.9	
						2,250	775.0	7.0		46	4.61	wnw.	9.7	
						2,000	799.3	8.7		44	4.95	wnw.	9.5	
						1,750	823.8	10.4		42	5.30	wnw.	9.2	
11:26	960.0	24.0	25	wnw.	8.9	1,721	825.8	10.6	0.90	42	5.37	wnw.	9.2	
						1,500	848.6	12.6		39	5.69	wnw.	8.8	
						1,250	874.0	14.9		36	6.10	wnw.	8.4	
						1,000	900.2	17.1		33	6.44	wnw.	8.0	
11:47	959.9	24.4	26	wnw.	8.9	802	920.9	18.9	1.59	31	6.77	wnw.	7.7	
						750	926.5	19.7		30	6.88	wnw.	8.0	
						500	953.8	23.7		26	7.62	wnw.	9.5	
11:54	959.8	24.6	25	wnw.	9.8	444	959.8	24.6		25	7.74	wnw.	9.8	8/10 Ci.St., wnw.

October 11, 1918 (No. 2).

P. M.														
12:15	959.6	24.8	23	wnw.	9.8	444	959.6	24.8		23	7.20	wnw.	9.8	8/10 Ci.St., wnw.
						500	953.5	24.0		23	6.86	wnw.	10.3	
						750	926.4	20.6		24	5.82	wnw.	12.4	
12:36	959.5	25.0	23	wnw.	8.9	818	919.0	19.7	1.36	24	5.51	wnw.	13.0	
						1,000	899.5	17.8		27	5.50	wnw.	13.0	
						1,250	873.1	15.1		31	5.32	wnw.	13.1	
						1,500	847.5	12.5		34	4.93	wnw.	13.1	
						1,750	822.6	9.9		38	4.64	wnw.	13.2	
12:51	959.2	24.9	24	wnw.	8.9	1,862	811.8	8.7	1.05	40	4.50	wnw.	13.2	
						2,000	798.3	7.8		41	4.34	wnw.	13.3	
						2,250	774.5	6.3		42	4.01	wnw.	13.4	
						2,500	751.1	4.7		44	3.76	wnw.	13.5	
						2,750	728.1	3.2		45	3.46	wnw.	13.6	
1.39	958.8	25.4	23	wnw.	8.9	2,838	720.0	2.6	0.62	46	3.39	wnw.	13.7	1/10 Ci.St., wnw.
						3,000	706.0	1.7		46	3.18	wnw.	14.4	
						3,250	684.3	0.4		46	2.89	wnw.	15.5	
						3,500	663.6	−1.0		46	2.59	wnw.	16.5	
						3,750	643.1	−2.3		45	2.27	wnw.	17.6	
						4,000	622.8	−3.7		45	2.02	wnw.	18.7	
2:38	958.5	25.6	21	wnw.	8.9	4,020	621.3	−3.8	0.56	45	2.00	wnw.	18.8	
						4,000	622.8	−3.7		45	2.02	wnw.	18.8	
						3,750	643.1	−2.2		46	2.34	wnw.	18.1	
						3,500	663.6	−0.8		47	2.68	wnw.	17.4	
						3,250	684.8	0.6		49	3.13	wnw.	16.7	
3:04	958.4	25.8	20	wnw.	8.9	3,012	705.4	2.0	0.67	50	3.53	wnw.	16.1	
						3,000	706.6	2.1		50	3.56	wnw.	16.1	
						2,750	728.9	3.8		49	3.93	wnw.	15.6	
						2,500	751.1	5.4		49	4.40	wnw.	15.1	
						2,250	774.3	7.1		48	4.84	wnw.	14.7	
						2,000	798.0	8.8		47	5.33	wnw.	14.2	Solar halo; 22° radius, from 2:30 p. m. to end of flight.
3:37	958.2	25.7	21	wnw.	8.9	1,905	807.2	9.4	1.08	47	5.54	wnw.	14.0	
						1,750	822.6	11.1		44	5.81	wnw.	13.6	
						1,500	847.5	13.8		40	6.31	wnw.	12.8	
						1,250	872.7	16.5		35	6.57	wnw.	12.1	
						1,000	898.8	19.2		31	6.90	wnw.	11.4	
4:00	958.1	25.1	23	wnw.	8.9	853	914.1	20.8	1.08	28	6.88	wnw.	11.0	
						750	925.5	22.0		26	6.87	wnw.	9.4	
						500	952.1	24.6		22	6.81	wnw.	9.2	
4:05	958.1	25.2	21	wnw.	8.9	444	958.1	25.2		21	6.73	wnw.	8.9	9/10 Ci.St., wnw.

October 11, 1918 (No. 3).

P. M.														
4:25	957.9	25.3	19	wnw.	6.7	444	957.9	25.3		19	6.13	wnw.	6.7	9/10 Ci.St., wnw.
						500	951.7	24.7		20	6.22	wnw.	7.4	
						750	924.8	21.9		23	6.04	wnw.	10.3	
4:33	957.9	25.2	22	wnw.	7.2	832	916.1	21.0	1.11	24	5.97	wnw.	11.3	
						1,000	898.3	19.2		25	5.56	wnw.	10.5	Solar halo ended at 4:35 p. m.
						1,250	872.4	16.4		27	5.04	wnw.	9.1	
4:39	957.8	25.1	22	wnw.	5.8	1,277	869.6	16.1	1.10	27	4.94	wnw.	9.0	
						1,500	846.9	13.9		31	4.92	wnw.	9.2	
						1,750	821.8	11.5		35	4.75	wnw.	9.4	
						2,000	797.4	9.1		39	4.51	wnw.	9.6	
5:10	957.5	23.9	26	wnw.	4.0	2,199	778.5	7.1	0.98	42	4.24	wnw.	9.8	
						2,250	773.7	6.9		43	4.28	wnw.	9.9	
						2,500	750.5	5.7		43	4.40	wnw.	10.4	
						2,750	728.0	4.4		52	4.35	nw.	10.9	
5:39	958.0	22.2	33	wnw.	3.6	2,839	720.2	4.0	0.48	54	4.39	nw.	11.1	
						3,000	706.0	3.1		53	4.04	nw.	12.0	
						3,250	684.7	1.8		52	3.62	nw.	13.5	
						3,500	663.7	0.4		51	3.21	nw.	15.0	

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 11, 1918 (No. 3)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:02	958.1	21.2	36	w.	4.0	3,694	647.8	−0.6	0.60	50	2.90	nw.	16.1	9/10 Cl.St., wnw.
						3,500	663.7	0.7		50	3.22	nw.	16.3	
						3,250	684.8	2.3		51	3.68	nw.	16.4	
						3,000	706.5	3.9		52	4.20	wnw.	16.6	
6:39	958.5	18.3	38	wsw.	4.0	2,805	723.2	5.2	−1.59	52	4.60	wnw.	16.8	
						2,750	728.5	4.3		54	4.49	wnw.	16.2	
6:43	958.5	18.2	38	wsw.	4.0	2,673	735.1	3.1	0.99	56	4.27	wnw.	15.3	
						2,500	750.9	4.8		56	4.82	wnw.	14.8	
						2,250	774.0	7.3		56	5.73	wnw.	14.0	
7:00	958.7	17.3	36	wsw.	4.0	2,108	787.6	8.7	0.92	56	6.30	wnw.	13.6	
						2,000	797.7	9.7		54	6.50	wnw.	12.8	
						1,750	822.2	12.0		50	7.02	wnw.	10.8	
						1,500	847.1	14.3		46	7.50	wnw.	8.8	
7:15	958.7	16.2	40	wsw.	4.5	1,279	869.6	16.3	1.07	43	7.97	wnw.	7.0	
						1,250	872.4	16.6		43	8.12	wnw.	7.0	
						1,000	898.3	19.3		37	8.28	wnw.	7.1	
7:24	958.7	15.3	44	wsw.	4.5	878	911.2	20.3	−1.20	35	8.34	wnw.	7.2	
						750	925.2	18.8		38	8.25	w.	6.3	
						500	952.8	15.8		44	7.90	wsw.	4.4	
7:35	958.7	15.1	45	wsw.	4.0	444	958.7	15.1		45	7.72	wsw.	4.0	2/10 Cl.St., wnw.
October 12, 1918.														
A. M.														
6:36	958.1	14.4	48	w.	6.7	444	958.1	14.4		48	7.87	w.	6.7	Cloudless.
						500	952.2	15.4		46	8.05	w.	7.9	
						750	925.0	20.2		39	9.24	wnw.	13.1	
6:41	958.1	14.5	48	w.	6.7	880	910.6	22.6	−1.88	35	9.60	nw.	15.8	
						1,000	898.0	21.5		36	9.23	nw.	15.9	
						1,250	872.4	19.3		38	8.51	nw.	16.0	
6:58	958.1	14.6	48	w.	8.0	1,500	847.3	17.1	0.89	39	7.60	nw.	16.1	
						1,750	822.8	14.6		41	6.81	nw.	16.8	
						2 000	798.6	12.2		44	6.25	nw.	17.6	
7:18	958.3	15.4	45	w.	8.9	2.211	778.4	10.1	0.88	46	5.69	nw.	18.2	
						2 000	798.6	11.7		45	6.19	nw.	17.4	
						1,750	822.8	13.7		44	6.90	nw.	16.5	
						1,500	847.5	15.6		44	7.80	nw.	15.5	
7:41	958.5	16.2	44	w.	10.3	1,312	866.0	17.1	0.44	43	8.38	nw.	14.8	
						1,250	872.4	17.4		43	8.53	nw.	14.9	
						1,000	898.3	18.5		42	8.95	nw.	15.1	
7:52	958.6	17.0	43	w.	8.9	793	920.3	19.4	−0.52	41	9.24	nw.	15.3	
						750	925.0	19.2		41	9.12	nw.	14.8	
						500	952.7	17.9		41	8.41	w.	11.9	
8:00	958.7	17.6	41	w.	11.2	444	958.7	17.6		41	8.25	w.	11.2	Cloudless.
October 13, 1918.														
A. M.														
7:01	972.0	2.0	64	nw.	5.8	444	972.0	2.0		64	4.52	nw.	5.8	Cloudless.
7:20	972.5	4.2	57	nw.	5.4	751	936.9	8.4	−2.08	60	6.61	nw.	4.4	
						1,000	909.0	6.1		62	5.84	nnw.	4.2	
8:10	972.7	6.0	52	nw.	5.4	1,040	904.8	5.7	0.93	62	5.68	nnw.	4.2	
						1,2'0	882.2	5.0		57	4.97	nnw.	5.9	
						1,500	855.8	4.2		51	4.21	nnw.	7.9	
						1,750	830.0	3.4		45	3.51	n.	9.9	
						2,000	805.0	2.5		39	2.85	n.	12.0	
8:47	972.9	9.0	45	nw.	4.5	2,130	792.2	2.1	0.33	36	2.56	n.	13.0	
						2,2 0	780.9	1.6		35	2.40	n.	13.7	
						2,500	756.9	0.7		32	2.06	n.	15.1	
						2,750	733.8	−0.3		30	1.79	n.	16.6	
						3,000	711.0	−1.3		28	1.53	n.	18.0	
						3,250	689.0	−2.3		25	1.26.	n.	19.4	
						3,500	667.2	−3.3		23	1.07	n.	20.9	Few A.Cu., nw.
9:13	973.0	10.4	43	nnw.	3.6	3,576	660.8	−3.6	0.43	22	0.99	n.	21.3	
						3,500	667.2	−3.2		22	1.03	n.	20.8	
						3,250	689.0	−2.1		21	1.08	n.	19.0	
						3,000	711.0	−0.9		21	1.19	n.	17.3	
						2,750	733.4	0.3		20	1.25	n.	15.5	
						2,500	756.5	1.4		19	1.28	n.	13.8	
9:57	973.0	12.0	44	n.	3.6	2,405	765.3	1.9	0.41	19	1.33	n.	13.1	
						2,250	780.6	2.5		20	1.46	n.	12.9	
						2,000	805.0	3.6		21	1.66	n.	12.5	
						1,750	830.0	4.6		22	1.87	nnw.	12.1	
10:21	972.9	13.0	42	n.	3.1	1,585	847.0	5.3	0.08	23	2.05	nnw.	11.9	
						1,500	855.8	5.4		24	2.15	nnw.	10.3	
						1,250	882.2	5.6		28	2.55	nnw.	5.7	
10:29	972.8	13.3	39	n.	3.1	1,102	898.4	5.7	1.14	30	2.75	nnw.	3.0	
						1,000	909.0	6.9		31	3.08	nnw.	3.0	
						750	937.0	9.7		35	4.21	n.	2.8	
						500	966.2	12.5		38	5.51	n.	2.7	
10:38	972.7	13.3	39	n.	2.7	444	972.7	13.3		39	5.96	n.	2.7	1/10 A.Cu., nw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 14, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:20	965.1	3.2	72	ese.	4.5	444	965.1	3.2	.....	72	5.54	ese.	4.5	Cloudless.
						500	958.8	4.2	.....	69	5.69	ese.	5.5	
						750	929.3	8.4	.....	55	6.06	sse.	9.7	
6:28	964.3	3.8	69	ese.	4.5	918	910.3	11.3	−1.71	45	6.03	s.	12.6	
						1,000	900.4	11.7	.....	45	6.19	s.	11.9	
						1,250	874.0	13.0	.....	46	6.89	s.	9.7	
						1,500	848.7	14.3	.....	47	7.66	s.	7.4	
7:00	963.8	4.2	68	se.	5.4	1,674	831.5	15.2	−0.52	47	8.12	s.	5.9	
						1,750	823.9	14.7	.....	46	7.70	s.	5.7	
						2,000	799.4	13.0	.....	43	6.44	ssw.	5.1	
						2,250	775.9	11.2	.....	39	5.19	sw.	4.4	
						2,500	753.3	9.5	.....	36	4.27	sw.	3.8	
8:48	962.6	12.5	44	se.	8.9	2,643	740.7	8.5	0.86	34	3.77	wsw.	3.4	
						2,500	753.3	10.0	.....	33	4.05	wsw.	3.8	
						2,250	776.7	12.5	.....	32	4.64	wsw.	4.5	
						2,000	800.4	15.1	.....	30	5.15	wsw.	5.2	
9:20	962 3	14.0	42	se.	7.6	1,917	808.4	16.0	0.45	30	5.45	wsw.	5.4	
						1,750	824.9	16.8	.....	31	5.93	wsw.	6.2	
						1,500	849.1	17.9	.....	32	6.56	sw.	7.3	
9:40	962.0	14.7	41	sse.	7.2	1,254	873.6	19.0	−2.66	33	7.25	ssw.	8.4	
						1,000	900.0	12.2	.....	42	5.97	s.	7.8	
9:52	961.9	15.2	39	sse.	8.5	905	910.3	9.7	1.28	45	5.41	sse.	7.6	
						750	927.5	11.7	.....	43	5.91	sse.	7.5	
						500	955.5	14.9	.....	40	6.78	sse.	7.2	
9:59	961.8	15.6	39	sse.	7.2	444	961.8	15.6	.....	39	6.91	sse.	7.2	Cloudless.

October 13, 1918.

A. M.														
6:57	964.8	5.7	79	n.	6.7	444	964.8	5.7	.....	79	7.24	n.	6.7	1/10 Cl.St., nw.; light smoke from forest fires in n.
						500	958.8	7.0	.....	75	7.52	n.	7.1	
						750	930.3	13.0	.....	58	8.69	nne.	8.8	
7:00	964.8	5.7	76	n.	6.7	814	922.8	14.5	−2.38	54	8.92	ne.	9.2	
						1,000	902.2	13.8	.....	52	7.69	ne.	8.6	
						1,250	876.1	13.0	.....	50	7.49	ne.	7.8	
7:42	964.8	6.6	74	n.	6.7	1,324	848.6	12.7	0.35	49	7.20	ne.	7.5	
						1,500	831.2	12.3	.....	50	7.16	ne.	5.7	
8:20	964.9	9.0	65	n.	5.8	1,571	843.6	12.1	0.24	51	7.20	ne.	4.9	3/10 Cl.St., nw.
						1,750	826.0	11.3	.....	48	6.43	nne.	5.7	
						2,000	801.5	10.1	.....	43	5.31	n.	6.9	
						2,250	777.9	9.0	.....	39	4.48	nnw.	8.1	
8:49	965.1	10.2	66	n.	6.7	2,405	763.0	8.3	0.41	36	3.94	nw.	8.8	
						2,250	777.9	8.9	.....	40	4.56	nw.	7.8	
						2,000	801.5	9.7	.....	46	5.53	nnw.	6.3	
9:12	965.3	11.2	58	n.	5.8	1,960	805.2	9.9	0.42	47	5.73	nnw.	6.0	
						1,750	826.0	10.8	.....	48	6.22	n.	5.4	
						1,500	851.2	11.8	.....	50	6.92	nne.	4.4	
9:18	965.3	11.4	57	ne.	6.7	1,343	867.0	12.5	0.33	51	7.39	ne.	3.8	
						1,250	876.8	12.7	.....	50	7.34	ne.	5.2	
						1,000	903.4	13.3	.....	47	7.18	ne.	8.9	
9:30	965.4	11.6	57	ne.	6.3	864	917.9	13.6	−1.39	46	7.17	ne.	10.9	
						750	931.0	11.8	.....	49	6.78	ne.	10.2	
9:35	965.4	11.7	57	ne.	6.3	600	947.5	9.4	1.54	53	6.25	ne.	9.2	
						500	959.0	10.9	.....	55	7.17	ne.	7.3	
9:38	965.4	11.8	57	ne.	6.3	444	965.4	11.8	.....	57	7.89	ne.	6.3	5/10 Cl.St., nw.; light smoke from forest fires in n.

October 16, 1918.

A. M.														
6:49	959.9	9.9	70	ene.	5.8	444	959.9	9.9	.....	70	8.54	ene.	5.8	6/10 A.Cu., wsw.; light smoke ne.
						500	953.5	10.4	.....	69	8.70	e.	6.2	
						750	925.7	12.6	.....	65	9.48	se.	7.7	
7:01	959.8	9.8	70	ene.	4.0	905	908.3	14.0	−0.89	63	10.07	s.	8.7	
						1,000	898.0	15.4	.....	59	10.32	s.	8.6	
						1,250	871.9	18.9	.....	47	10.26	ssw.	8.5	
7:39	959.5	11.0	68	e.	4.0	1,393	857.7	21.0	−1.43	41	10.20	ssw.	8.4	
						1,500	846.9	20.0	.....	40	9.35	ssw.	8.1	
						1,750	822.5	17.6	.....	39	7.85	ssw.	7.4	
						2,000	798.9	15.2	.....	37	6.39	sw.	6.7	
8:14	959.3	13.2	62	e.	2.2	2,159	784.0	13.7	0.93	36	5.64	sw.	6.3	
						2,250	775.7	13.0	.....	35	5.24	sw.	6.5	
						2,500	752.9	10.9	.....	34	4.43	sw.	7.1	Cloudless.
						2,750	730.5	8.9	.....	32	3.65	sw.	7.8	
9:10	959.0	16.0	56	e.	4.9	2,804	725.8	8.5	0.84	32	3.55	sw.	7.9	
						2,750	730.5	9.0	.....	32	3.67	sw.	7.8	
						2,500	752.9	11.1	.....	32	4.23	sw.	7.4	
						2,250	775.7	13.3	.....	32	4.89	sw.	7.1	
						2,000	798.7	15.5	.....	33	5.81	ssw.	6 7	
						1,750	822.2	17.7	.....	33	6.68	ssw.	6.3	
9:30	958.9	16.8	49	se.	4.5	1,691	828.2	18.2	0.63	33	6.90	ssw.	6.2	
						1,500	846.6	19.4	.....	32	7.21	ssw.	6.3	
9:45	958.8	17.0	50	se.	4.0	1,328	863.9	20 5	−1.42	31	7.48	ssw.	6.3	
						1,250	871.5	19.4	.....	32	7.21	ssw.	5.6	
						1,000	897.6	15.9	.....	36	6.51	ssw.	3.2	
9:51	958.8	18.0	48	ssw.	3.6	827	916.4	13 4	0.99	39	5.99	ssw.	1.6	
						750	924.7	14.2	.....	41	6.64	ssw.	2.1	
						500	952.4	16.6	.....	48	9.07	s.	3.6	
9:57	958.7	17.2	50	s.	4.0	444	958.7	17.2	.....	50	9.81	s.	4.0	Cloudless.

SUPPLEMENT NO. 15.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 17, 1918, series (No. 1).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
6:31	968.1	5.0	92	n.	6.3	444	968.1	5.0	.....	92	8.02	n.	6.3	Few Cl.St., w.
						500	961.7	5.2	.....	91	8.05	n.	8.1	
6:35	968.2	5.0	92	n.	6.7	750	933.0	5.8	.....	87	8.02	ne.	15.9	
						872	919.0	6.2	−0.28	85	8.06	ene.	19.7	
6:53	968.5	5.0	92	n.	7.2	1,000	904.8	6.4	.....	83	7.98	ne.	17.2	
						1,250	877.8	7.0	.....	77	7.72	nne.	12.3	
						1,324	869.9	7.1	−0.20	76	7.67	nne.	10.9	
7:04	968.7	5.0	90	n.	7.6	1,500	851.5	6.7	.....	68	6.67	nne.	10.8	
						1,750	826.0	6.0	.....	57	5.33	n.	10.7	
7:52	969.5	5.7	95	nne.	9.8	2,000	801.4	5.4	.....	46	4.13	n.	10.5	
						2,022	799.2	5.3	0.26	45	4.01	n.	10.5	
8:13	969.8	6.3	95	nne.	11.2	2,250	777.6	5.4	.....	27	2.42	nnw.	8.4	8/10 St., n.
						2,200	776.7	5.4	−0.04	26	2.33	nnw.	8.3	
						2,500	754.0	4.1	.....	32	2.62	nnw.	7.9	
						2,750	731.1	2.8	.....	38	2.84	n.	7.6	
8:36	970.0	6.9	88	ne.	8.5	2,806	726.2	2.5	0.46	40	2.92	n.	7.5	
						2,750	731.1	2.7	.....	39	2.89	n.	7.5	
						2,500	754.0	3.7	.....	34	2.71	nne.	7.7	
8:53	970.2	7.2	86	ne.	8.5	2,250	777.6	4.7	.....	29	2.48	nne.	7.8	
						2,000	801.4	5.7	.....	23	2.11	ne.	7.9	
						1,886	812.9	6.1	−0.24	21	1.98	ne.	8.0	Altitude of St. base about 700 m.
9:09	970.4	8.0	84	ne.	8.9	1,750	826.2	5.8	.....	31	2.86	ne.	8.8	
						1,500	852.4	6.2	.....	50	4.42	ene.	10.3	
						1,292	874.6	4.7	−0.10	65	5.55	ene.	11.5	
9:16	970.5	8.0	84	nne.	12.1	1,250	879.0	4.7	.....	68	5.81	ene.	11.4	
						1,000	906.6	4.4	.....	89	7.45	ene.	10.6	
						890	919.0	4.3	0.83	98	8.14	ene.	10.2	
						750	935.1	5.5	.....	94	8.49	ne.	10.8	
						500	963.9	7.5	.....	86	8.92	nne.	11.9	
						444	970.5	8.0	.....	84	9.01	nne.	12.1	6/10 St.Cu., n.

October 17, 1918, series (No. 2).

A. M.														
9:49	970.6	8.2	82	nne.	11.6	444	970.6	8.2	.....	82	8.91	nne.	11.6	6/10 St.Cu., n.
						500	964.0	7.8	.....	82	8.68	nne.	11.8	
9:56	970.6	8.2	82	nne.	12.5	750	935.6	6.1	.....	84	7.91	ne.	12.9	
						958	911.7	4.7	0.68	85	7.26	ne.	13.8	
						1,000	907.0	4.7	.....	83	7.08	ne.	13.4	
10:10	970.6	8.6	78	ne.	11.6	1,250	879.3	4.4	.....	69	5.77	ne.	11.0	
						1,500	852.7	4.1	.....	55	4.50	ene.	8.6	
						1,598	842.7	4.0	0.11	49	3.98	ene.	7.6	
10:24	970.7	9.0	76	ne.	11.6	1,750	827.0	4.7	.....	41	3.50	ene.	7.4	
11:40	971.2	10.4	69	ne.	10.3	2,000	802.5	6.3	.....	29	2.77	ne.	7.2	
						2,056	796.9	6.6	−0.57	26	2.54	ne.	7.1	8/10 St.Cu., ne.
						2,219	781.9	7.3	−0.36	9	0.92	ne.	1.8	
						2,000	802.9	6.6	.....	8	0.78	ne.	4.5	
P. M.						1,750	827.8	6.0	.....	7	0.65	ene.	7.5	
12:30	971.1	12.0	59	ne.	10.7									
						1,680	835.0	5.8	−0.81	7	0.65	ene.	8.4	
12:38	971.0	10.7	64	ne.	10.3	1,500	853.4	4.4	.....	11	0.92	ene.	10.3	
						1,322	872.2	2.9	0.59	15	1.13	ene.	12.2	
12:50	971.0	11.2	60	ne.	8.9	1,250	880.0	3.3	.....	28	2.17	ene.	11.6	
						1,000	907.8	4.8	.....	71	6.11	ene.	9.5	
12:57	970.9	12.0	58	ne.	9.4	935	914.9	5.2	1.38	83	7.35	ene.	9.0	
						750	935.7	7.8	.....	74	7.83	ene.	9.2	
						500	964.0	11.2	.....	61	8.11	ne.	9.4	
						444	970.9	12.0	.....	58	6.73	ne.	9.4	1/10 Cl.St., sw.; 6/10 St.Cu., nne.

October 17, 1918, series (No. 3).

P. M.														
1:21	970.9	12.8	53	ne.	8.5	444	970.9	12.8	.....	51	7.83	ne.	8.5	1/10 Cl.St., sw.; 6/10 St.Cu., nne.
1:28	970.9	12.0	54	ne.	8.5	500	964.2	11.4	.....	56	7.55	ne.	8.9	
						682	943.5	6.8	2.52	66	6.52	ne.	10.3	
1:50	970.9	11.4	55	ne.	10.7	750	935.9	6.2	.....	70	6.64	ne.	9.9	
						1,000	907.4	4.0	.....	84	6.83	ene.	8.7	
2:00	970.9	11.3	57	ene.	11.2	1,051	901.7	3.6	0.87	87	6.88	ene.	8.4	
						1,250	879.9	2.1	.....	58	4.12	ene.	6.7	
2:09	970.9	11.6	57	ene.	8.9	1,336	870.3	1.5	0.74	46	3.13	ene.	5.9	
						1,500	853.0	4.0	.....	32	2.00	ene.	6.8	
						1,660	836.3	6.4	−1.51	19	1.83	ene.	7.6	
3:15	970.9	12.3	53	ne.	8.0	1,750	827.0	6.4	.....	18	1.73	ene.	7.1	
						2,000	802.4	6.4	.....	14	1.35	ene.	5.7	
						2,250	778.6	6.4	.....	10	0.96	ene.	4.2	7/10 Cl.St., wsw.
3:42	970.9	12.4	50	ene.	8.9	2,327	771.3	6.4	0.01	9	0.86	ene.	3.8	
						2,250	778.6	6.4	.....	9	0.86	ene.	4.1	
3:50	970.9	12.3	50	ene.	9.4	2,000	802.4	6.5	.....	9	0.87	ene.	5.0	
						1,750	827.8	6.5	.....	10	0.97	e.	5.8	
3:58	970.9	12.1	50	ne.	8.9	1,500	853.4	6.6	.....	10	0.98	e.	6.7	
						1,475	856.3	6.6	−1.08	10	0.98	e.	6.8	
4:07	970.9	12.2	52	ne.	8.9	1,250	879.9	4.2	.....	29	2.39	ene.	12.2	
						1,198	885.9	3.6	0.99	34	2.69	ene.	13.4	
						1,000	907.4	5.6	.....	48	4.37	ene.	11.0	
						825	927.3	7.3	1.29	61	6.24	ene.	8.9	
						750	935.9	8.3	.....	59	6.46	ene.	8.9	
						500	964.2	11.5	.....	53	7.19	ne.	8.9	
						444	970.9	12.2	.....	52	7.39	ne.	8.9	6/10 Cl.St., wsw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 17, 1918, series (No. 4).

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.		
4:32	970.7	12.1	54	ne.	10.3	444	970.7	12.1	.....	54	7.62	ne.	10.3		6/10 Ci.St., wsw.
						500	964.1	11.4	.....	56	7.55	ne.	10.4		
						750	935.6	8.1	.....	64	6.91	ene.	10.9		
4:40	970.7	12.1	55	ne.	8.5	874	921.6	6.5	1.30	68	6.58	ene.	11.2		
						1,000	907.5	5.3	.....	71	6.33	ene.	10.8		
						1,250	880.0	3.0	.....	78	5.91	ene.	10.0		
5:02	970.6	11.7	57	ne.	7.2	1,274	877.3	2.8	0.92	79	5.90	ene.	9.9		
						1,500	852.5	1.2	.....	76	5.06	ene.	9.3		
5:10	970.6	11.5	55	ne.	5.4	1,520	850.9	1.1	0.09	76	5.03	ene.	9.2		
						1,750	826.7	3.4	.....	43	3.35	ese.	7.1		
6:45	970.7	6.4	69	nne.	5.4	1,965	805.0	5.6	−1.01	13	1.18	sse.	5.1		
						2,000	801.4	5.5	.....	13	1.17	sse.	5.1		
						2,250	777.0	4.6	.....	13	1.10	sse.	5.1		
						2,500	753.8	3.6	.....	12	0.95	sse.	5.1		
6:52	970.8	6.1	67	nne.	6.3	2,719	733.5	2.8	0.10	12	0.90	sse.	5.1		
						2,500	753.8	2.4	.....	14	1.02	sse.	6.1		
						2,250	777.0	2.0	.....	16	1.13	sse.	7.2		
						2,000	801.4	1.6	.....	18	1.23	sse.	8.3		
						1,750	827.2	1.2	.....	20	1.33	sse.	9.4		
7:15	970.9	5.1	70	nne.	5.8	1,517	850.9	0.8	0.90	22	1.42	sse.	10.4		
						1,500	853.0	1.0	.....	23	1.51	sse.	10.4		
						1,250	880.5	3.2	.....	40	3.08	se.	10.4		
						1,000	908.2	5.4	.....	56	5.02	ese.	10.5		
7:49	970.9	4.6	75	nne.	6.3	827	926.5	7.0	−0.78	68	6.81	e.	10.5		
						750	936.1	6.4	.....	70	6.73	ene.	9.5		
						500	964.1	4.4	.....	75	6.28	ne.	6.1		
8:02	970.9	4.0	76	nne.	5.4	444	970.9	4.0	.....	76	6.18	nne.	5.4		2/10 Ci., w.; 1/10 A.St., w.

October 17 and 18, 1918, series (No. 5).

P. M.															
8:45	971.2	3.4	72	nne.	4.0	444	971.2	3.4	.....	72	5.62	nne.	4.0		2/10 Ci., w.; 1/10 A.St., w.
						500	964.8	3.8	.....	72	5.77	nne.	5.3		
						750	935.7	5.8	.....	72	6.64	nne.	11.2		
8:51	971.2	3.6	74	nne.	4.0	841	925.1	6.5	−0.78	72	6.97	nne.	13.3		
						1,000	906.9	5.0	.....	77	6.71	ne.	12.8		
						1,250	879.0	2.5	.....	84	6.14	ene.	11.9		
						1,500	852.5	0.1	.....	92	5.66	e.	11.1		
9:16	971.2	3.1	77	nne.	4.5	1,665	835.4	−1.5	0.97	97	5.23	ese.	10.5		
						1,750	826.7	−0.2	.....	82	4.91	ese.	10.3		
						2,000	801.2	3.7	.....	37	2.95	sse.	9.8		
10:15	970.8	4.1	79	nne.	6.3	2,069	794.2	4.8	−1.56	25	2.15	sse.	9.7		Sky overcast with Ci. haze; complete lunar halo, 22½° radius.
						2,250	776.9	5.2	.....	19	1.68	sse.	7.6		
10:50	970.7	4.8	78	e.	5.8	2,321	770.2	5.3	−0.29	17	1.51	sse.	6.8		
						2,500	753.1	3.9	.....	16	1.29	sse.	6.8		
						2,750	730.5	1.9	.....	15	1.05	sse.	6.7		
11:17	970.5	4.0	74	e.	4.5	2,868	719.8	0.9	0.68	15	0.98	sse.	6.7		
						2,750	730.5	1.6	.....	15	1.03	sse.	6.7		
						2,500	752.8	2.9	.....	14	1.05	sse.	6.7		
						2,250	776.4	4.4	.....	13	1.09	sse.	6.8		
11:53	970.3	2.2	86	e.	4.0	2,068	794.2	5.4	−0.47	13	1.17	sse.	6.8		
						2,000	800.8	5.1	.....	14	1.23	sse.	7.1		
						1,750	825.9	3.9	.....	16	1.29	sse.	8.2		
						1,500	851.5	2.8	.....	18	1.34	se.	9.2		
A. M.															
12:10	970.2	2.2	86	e.	4.0	1,289	874.2	1.7	0.63	20	1.38	se.	10.2		
						1,250	878.0	2.0	.....	25	1.77	se.	10.8		
						1,000	905.9	3.6	.....	53	4.19	ese.	14.0		
12:25	970.2	2.0	86	e.	4.5	831	925.1	4.6	−0.67	71	6.02	ese.	16.1		
						750	934.7	4.1	.....	74	6.06	ese.	13.7		
						500	963.7	2.4	.....	84	6.10	e.	6.2		
12:31	970.1	2.0	86	e.	4.5	444	970.1	2.0	.....	86	6.07	e.	4.5		6/10 Ci., w.

October 18, 1918, series (No. 6).

A. M.															
1:03	969.9	0.5	91	ese.	4.5	444	969.9	0.5	.....	91	5.76	ese.	4.5		6/10 Ci.St., w.
						500	963.5	0.8	.....	91	5.89	ese.	6.1		Lunar halo, 22½° radius, at beginning of flight ended about 2:27 a. m.
						750	934.3	1.9	.....	90	6.31	ese.	13.2		
1:08	969.9	0.5	91	ese.	4.5	912	915.1	2.7	−0.47	89	6.60	ese.	17.8		
						1,000	905.7	2.7	.....	83	6.19	ese.	16.0		
						1,250	877.9	2.5	.....	64	4.68	se.	11.0		
1:40	969.9	0.4	91	ese.	4.5	1,415	859.9	2.4	0.06	52	3.78	se.	7.7		
						1,500	851.3	3.2	.....	46	3.54	se.	7.6		
						1,750	825.4	5.7	.....	28	2.56	se.	7.3		
2:24	970.1	−0.4	90	e.	4.5	1,898	810.7	7.2	−0.99	17	1.73	se.	7.1		
						2,000	800.5	6.7	.....	16	1.57	se.	6.8		10/10 St.Cu., se.
3:47	970.3	−0.1	92	e.	3.6	2,176	783.5	5.8	0.51	13	1.20	sse.	6.2		
						2,250	776.0	5.3	.....	13	1.16	sse.	6.4		
						2,500	752.1	3.6	.....	15	1.19	sse.	6.9		
						2,750	729.5	2.0	.....	16	1.13	s.	7.4		
						3,000	707.4	0.3	.....	18	1.12	s.	7.9		
3:58	970.3	0.0	92	e.	4.0	3,043	703.6	0.0	0.57	18	1.10	s.	8.0		
						3,000	707.4	0.2	.....	20	1.24	s.	8.0		
						2,750	729.5	1.4	.....	30	2.03	s.	8.1		
						2,500	752.1	2.5	.....	41	3.00	s.	8.1		
4:19	970.3	0.0	92	ene.	4.0	2,489	753.6	2.6	0.69	41	3.02	s.	8.1		
						2,250	776.0	4.2	.....	35	2.89	s.	7.9		
						2,000	800.5	6.0	.....	28	2.62	s.	7.7		

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 18, 1918, series (No. 6)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
4:34	970.3	0.2	92	ene.	3.6	1,863	813.7	6.9	−0.80	24	2.39	s.	7.6	
						1,750	825.4	6.0		33	3.09	s.	8.5	5/10 A.St., wsw.
						1,500	851.3	4.0		54	4.39	sse.	10.4	
						1,250	877.9	2.0		74	5.22	sse.	12.3	
						1,000	905.7	0.0		95	5.80	se.	14.3	
4:58	970.3	0.2	92	e.	4.5	983	907.1	−0.1	0.56	96	5.82	se.	14.4	
						750	934.3	0.0		94	5.74	ese.	9.9	
						500	963.5	0.2		92	5.70	e.	5.1	
5:09	970.3	0.2	92	e.	4.0	444	970.3	0.2		92	5.70	e.	4.0	3/10 A.St., wsw.

October 18, 1918, series (No. 7).

A. M.														
5:42	970.5	0.4	92	e.	4.5	444	970.5	0.4		92	5.79	e.	4.5	3/10 A.St., wsw
						500	964.0	0.5		93	5.89	e.	5.1	
						750	934.2	1.2		97	6.46	ese.	7.6	
5:53	970.6	0.6	93	e.	4.5	932	913.4	1.7	−0.27	100	6.91	se.	9.4	9/10 A.St., wsw.
						1,000	906.0	2.2		98	7.03	se.	8.7	
6:51	970.3	1.9	92	ese.	4.5	1,203	883.2	3.7	−0.74	92	7.32	sse.	6.6	10/10 A.St., wsw.
						1,250	878.5	4.6		83	7.04	sse.	6.2	
						1,500	852.3	9.6		37	4.42	ssw.	3.9	
7:51	970.3	3.3	94	ese.	3.6	1,561	845.8	10.8	−1.98	26	3.37	sw.	3.3	10/10 St., wsw.
						1,750	826.7	9.5		30	3.56	sw.	3.7	
						2,000	801.8	7.7		36	2.73	sw.	4.3	
						2,250	777.6	6.0		42	3.93	sw.	4.8	
						2,500	754.0	4.2		48	3.96	sw.	5.3	
7:59	970.3	3.7	91	ese.	3.6	2,755	731.3	2.4	0.70	54	3.92	sw.	5.9	
						3,000	709.0	0.0		60	4.22	sw.	6.9	
8:06	970.2	4.1	90	ese.	4.0	3,132	697.7	−1.3	0.84	77	4.22	sw.	7.5	
						3,000	709.0	−0.4		75	4.43	sw.	7.5	
						2,750	731.6	1.4		71	4.89	sw.	7.5	
						2,500	754.0	3.2		68	5.23	sw.	7.4	
						2,250	777.6	5.0		64	5.58	ssw.	7.4	
						2,000	801.8	6.8		61	6.03	ssw.	7.4	
						1,750	826.7	8.6		57	6.37	ssw.	7.3	
8:20	970.1	4.4	90	ese.	4.5	1,519	847.4	10.0	−1.02	54	6.63	ssw.	7.3	
						1,500	852.3	9.5		56	6.65	ssw.	7.3	
						1,250	878.5	7.0		67	6.71	s.	7.3	
						1,000	906.0	4.4		78	6.53	s.	7.3	
8:24	970.0	4.6	89	ese.	4.0	990	907.0	4.3	−1.03	78	6.48	s.	7.3	Altitude of St. base about 900 m.
8:44	969.8	5.2	89	ese.	6.3	874	919.9	3.1	0.60	100	7.63	s.	11.9	
						750	934.0	3.9		97	7.84	sse.	10.8	
						500	963.0	5.4		91	8.16	se.	8.5	
8:51	969.7	5.7	90	se.	8.0	444	969.7	5.7		90	8.24	se.	8.0	10/10 St., sw.

October 18, 1918, series (No. 8).

A. M.														
9:14	969.4	6.1	84	se.	8.5	444	969.4	6.1		84	7.91	se.	8.5	10/10 St., s.
						500	963.0	5.8		86	7.93	se.	9.0	
						750	933.5	4.4		93	7.78	sse.	11.0	
9:22	969.2	6.4	83	se.	8.9	937	912.5	3.3	0.57	98	7.59	s.	12.5	Altitude of St. base about 900 m.
						1,000	905.0	4.6		88	7.46	s.	11.9	
						1,250	877.5	9.6		47	5.62	s.	9.4	
9:40	968.9	6.7	79	se.	8.5	1,375	864.8	12.1	−2.01	26	3.67	s.	8.1	
						1,500	851.5	11.4		31	4.18	s.	7.3	
						1,750	826.5	9.9		42	5.12	ssw.	5.7	10/10 St., s.
10:54	968.6	8.0	74	sse.	7.2	1,992	803.0	8.5	0.58	52	5.77	sw.	4.1	
						2,000	802.5	8.4		52	5.73	sw.	4.1	
						2,250	778.6	6.9		55	5.47	sw.	5.3	
						2,500	755.1	5.3		58	5.17	sw.	6.5	
						2,750	732.3	3.7		61	4.86	sw.	7.7	
10:58	968.6	8.0	73	sse.	7.6	2,876	720.7	2.9	0.63	62	4.67	sw.	8.3	
						3,000	709.8	1.6		67	4.60	sw.	8.3	
11:05	968.6	8.6	71	sse.	8.5	3,174	694.3	−0.3	0.90	74	4.41	sw.	8.4	
						3,000	709.8	0.9		74	4.80	sw.	8.2	
						2,750	731.8	2.8		74	5.53	sw.	7.8	
						2,500	754.0	4.5		75	6.36	ssw.	7.5	
						2,250	777.4	6.3		75	7.16	ssw.	7.2	
11:30	968.4	9.4	69	sse.	7.6	2,146	787.8	7.1	0.56	75	7.57	ssw.	7.0	
						2,000	801.4	7.9		71	7.56	ssw.	7.8	
						1,750	826.0	9.3		63	7.38	ssw.	9.1	
						1,500	851.5	10.7		56	7.21	ssw.	10.4	
11:49	968.3	10.3	65	ssw.	8.0	1,463	855.4	10.9	−1.51	55	7.17	ssw.	10.6	
						1,250	877.5	7.7		72	7.67	ssw.	10.1	
						1,000	905.0	3.8		92	7.38	s.	9.5	
P. M.														
12:02	968.2	10.4	65	s.	8.9	933	912.5	3.8	1.28	92	7.38	s.	9.5	
						750	933.0	6.4		82	7.96	s.	9.3	
						500	961.0	10.0		68	8.40	s.	9.0	
12:13	967.9	10.8	65	s.	8.9	444	967.9	10.8		65	8.42	s.	8.9	8/10 St.Cu., s.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 18, 1918, series (No. 9).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
12:34	967.5	11.6	64	s.	8.5	444	967.5	11.6	.....	64	8.74	s.	8.5	8/10 St.Cu., s.
						500	960.7	10.7	.....	66	8.49	s.	8.9	
						750	932.0	6.9	.....	77	7.66	sse.	10.7	
12:40	967.3	11.2	65	sse.	8.5	827	923.6	5.7	1.54	80	7.33	sse.	11.3	
						1,000	904.0	4.7	.....	89	7.60	s.	12.0	
12:50	967.1	11.6	64	s.	9.4	1,129	889.8	3.9	0.60	96	7.68	s.	12.6	
						1,250	876.5	8.0	.....	71	7.62	s.	12 8	
12:58	966.9	11.6	64	s.	9.4	1,347	866.2	11.3	−3.39	52	6.96	s.	13 0	Altitude of St.Cu. base about 1,200 m.
						1,500	850.0	10.6	.....	55	7.03	s.	13.1	
						1,750	824.5	9.5	.....	59	7.00	s.	13.3	
						2,000	800.5	8.3	.....	64	7.01	s.	13.5	
1:14	966.8	11.8	64	s.	7.6	2,183	783.2	7.5	0.45	67	6.95	s.	13.6	
						2,250	776.6	7.0	.....	67	6.71	s.	13.7	
						2,500	753.4	5.1	.....	67	5.89	s.	14.2	
						2,750	730.6	3.1	.....	66	5.04	ssw.	14.7	
1:28	966.7	13.0	58	s.	8.9	2,831	723.5	2.5	0.77	66	4.82	ssw.	14.9	4/10 A.St., sw.; 4/10 St.Cu., s.
						3,000	708.3	1.1	.....	72	4.77	ssw.	14.9	
						3,250	686.3	−0.9	.....	80	4.54	ssw.	14.8	
						3,500	664.9	−3.0	.....	89	4.23	ssw.	14.8	
1:50	966.6	12.2	61	s.	8.0	3,600	657.0	−3.8	0.82	92	4.08	ssw.	14.8	8/10 A.Cu., ssw.
						3,750	644.5	−4.8	.....	91	3.71	ssw.	14.2	
						4,000	624.5	−6.3	.....	89	3.20	ssw.	13.3	
						4,250	604.7	−7.9	.....	88	2.75	ssw.	12.3	
2:22	966.4	12.2	64	s.	6.7	4,393	593.6	−8.8	0.58	87	2.51	ssw.	11.8	
						4,250	604.7	−8.0	.....	88	2.73	ssw.	12.0	
						4,000	624.2	−6.7	.....	90	3.12	ssw.	12.3	
2:48	966.3	12.4	64	s.	7.6	3,768	642.9	−5.4	0.88	91	3.53	ssw.	12.6	
						3,750	644.0	−5.2	.....	90	3.55	ssw.	12.6	
						3,500	664.3	−3.0	.....	83	3.94	ssw.	13.3	
						3,250	685.6	−0.8	.....	75	4.28	ssw.	14.0	
						3,000	707.5	1.4	.....	67	4.53	ssw.	14.7	
3:07	966.2	12.8	61	s.	8.0	2,761	729.4	3.5	0.50	60	4.71	ssw.	15.4	
						2,750	730.4	3.6	.....	60	4.75	ssw.	15.4	
						2,500	753.4	4.8	.....	63	5.42	ssw.	14.8	
						2,250	776.6	6.0	.....	66	6.17	s.	14.3	
3:21	966.1	13.5	58	s.	7.6	2,118	789.2	6.7	0.43	68	6.67	s.	14.0	
						2,000	800.5	7.2	.....	71	7.21	s.	14.2	
						1,750	824.5	8.3	.....	76	8.32	s.	14.8	
						1,500	849.8	9.3	.....	82	9.01	s.	15.3	
3:33	966.0	14.0	58	s.	8.9	1,348	866.2	10.0	−3.61	85	10.44	s.	15.6	
						1,250	876.0	6.5	.....	86	8.32	s.	15.2	
3:38	966.0	14.0	58	s.	7.6	1,229	878.8	5.7	0.98	86	7.88	s.	15.1	
						1,000	903.5	7.9	.....	79	8.41	s.	12.9	
3:47	966.0	14.0	58	s.	8.5	893	915.5	9.0	1.07	76	8.72	s.	11.9	
						750	931.4	10.5	.....	70	8.89	s.	10.8	
						500	959.3	13.2	.....	60	9.10	s.	8.9	
3:51	965.9	13.8	58	s.	8.5	444	965.9	13.8	.....	58	9.15	s.	8.5	6/10 A.St., ssw.; 2/10 St.Cu., s.

October 19, 1918.

A. M.														
6:34	963.8	8.0	97	wsw.	3.1	444	963.8	8.0	.....	97	10.41	wsw.	3.1	6/10 A.Cu., wsw.; 1/10 St., wsw.; light fog, wsw.
						500	957.5	8.4	.....	92	10.14	wsw.	4.7	
						750	929.0	10.3	.....	67	8.40	nw.	9.6	
6:38	963.8	8.0	97	wsw.	3.1	796	923.7	10.6	−0.74	63	8.05	nw.	13.0	
						1,000	900.5	9.0	.....	66	7.58	nw.	12.7	
						1,250	873.2	7.0	.....	70	7.01	wnw.	12.3	
						1,500	847.3	5.0	.....	74	6.45	w.	11.9	
7:09	963.9	7.0	95	sw.	4.0	1,656	831.9	3.8	0.79	77	6.18	w.	11.7	
						1,750	822.0	3.1	.....	77	5.88	w.	12.6	
						2,000	797.3	1.2	.....	76	5.06	w.	14.9	
7:19	963.9	7.7	95	sw.	2.2	2,099	787.6	0.4	0.77	76	4.78	w.	15.8	
						2,250	773.0	1.0	.....	50	3.28	w.	14.7	
7:28	964.0	7.8	95	sw.	2.2	2,332	765.1	1.3	−0.38	36	2.42	w.	14.1	
						2,500	749.0	0.4	.....	35	2.20	w.	14.5	
						2,750	726.3	−1.0	.....	34	1.91	wsw.	15 2	
						3,000	704.0	−2.3	.....	33	1.66	wsw.	15.9	
7:43	964.1	7.8	95	sw.	3.6	3,012	702.9	−2.4	0.54	33	1.65	wsw.	15.9	
						3,250	682.4	−3.7	.....	31	1.39	wsw.	16.7	
						3,500	661.1	−5.2	.....	30	1.18	wsw.	17.5	2/10 A.Cu., wsw.
8:12	964.3	8.3	92	w.	5.4	3,753	640.0	−6.6	0.69	28	0.98	wsw.	18.3	
						3,500	661.1	−4.6	.....	25	1.04	wsw.	17.8	
						3,250	682.4	−2.6	.....	22	1.08	wsw.	17.3	
8:44	964.6	9.0	90	w.	4.5	3,033	701.4	−0.8	−0.47	20	1.14	wsw.	16.8	
						3,000	704.0	−1.0	.....	21	1.18	wsw.	16.5	
8:49	964.7	9.2	89	w.	2.7	2,818	720.5	−1.8	0.45	26	1.37	wsw.	14.8	
						2,750	726.3	−1.5	.....	27	1.46	wsw.	14.6	
						2,500	749.0	−0.4	.....	31	1.83	w.	14.0	
						2,250	773.0	0.8	.....	36	2.33	w.	13.4	
						2,000	797.3	1.9	.....	40	2.80	w.	12.8	
						1,750	823.0	3.0	.....	44	3.34	wnw.	12.2	
9:16	964.8	11.2	82	wnw.	4.9	1,622	836.6	3.6	0.91	46	3.64	wnw.	11.9	
						1,500	848.8	4.4	.....	47	3.93	wnw.	11.4	
						1,250	874.9	7.0	.....	50	5.01	wnw.	10.3	
						1,000	901.8	9.3	.....	52	6.09	wnw.	9.2	
9:39	964.8	12.0	74	wnw.	5.4	808	923.7	11.0	0.27	54	7.09	wnw.	8.4	
						750	930.0	11.2	.....	57	7.58	wnw.	7.9	
						500	958.5	11.8	.....	71	9.83	wnw.	5.9	
9:45	964.8	12.0	74	wnw.	5.4	444	964.8	12.0	.....	74	10.38	wnw.	5.4	Few A.Cu., wsw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 20, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:11	967.7	9.2	44	wnw.	6.3	444	967.7	9.2	.....	44	5.12	wnw.	6.3	10/10 St., wnw.
						500	961.0	9.5	.....	44	5.22	wnw.	8.2	
7:13	967.7	9.2	44	wnw.	5.8	663	942.5	10.3	−0.50	45	5.64	wnw.	13.8	
						750	932.5	9.9	.....	45	5.49	wnw.	14.0	
						1,000	904.8	8.7	.....	43	4.84	nw.	14.5	
7:24	967.8	9.4	43	wnw.	5.4	1,250	878.0	7.5	0.48	42	4.36	nw.	15.1	
7:33	967.9	9.4	43	wnw.	5.8	1,310	871.7	8.5	−0.17	24	2.66	nnw.	15.9	
						1,500	851.5	6.9	.....	24	2.39	nnw.	17.6	
						1,750	826.0	4.9	.....	25	2.16	nnw.	19.8	
7:43	968.0	9.5	44	wnw.	6.3	1,884	812.8	3.8	0.82	25	2.00	nnw.	21.0	
						2,000	801.0	2.7	.....	29	2.15	nnw.	20.7	
						2,250	776.9	0.4	.....	37	2.34	nnw.	20.0	
						2,500	752.9	−1.9	.....	46	2.40	nnw.	19.3	
8:03	968.2	10.5	43	wnw.	6.7	2,745	730.2	−4.2	0.90	54	2.32	nnw.	18.6	
						2,500	752.9	−2.0	.....	54	2.79	nnw.	18.0	
						2,250	776.9	0.2	.....	54	3.35	nnw.	17.5	
						2,000	801.3	2.4	.....	53	3.85	nnw.	16.9	
						1,750	826.7	4.6	.....	51	4.32	nnw.	16.3	
8:12	968.4	10.7	42	wnw.	7.2	1,735	828.2	4.7	1.12	51	4.36	nnw.	16.3	9/10 St.Cu., wnw.
8:43	968.9	11.0	41	nnw.	7.2	1,511	851.4	7.2	0.18	19	1.93	nnw.	15.8	
						1,500	852.7	7.2	.....	19	1.93	nnw.	15.7	
						1,250	879.3	7.7	.....	23	2.42	nnw.	14.4	
						1,000	906.4	8.1	.....	27	2.92	nnw.	13.1	
9:02	969.2	11.2	40	wnw.	7.2	910	916.3	8.3	0.64	28	3.07	nw.	12.6	
						750	934.4	9.3	.....	32	3.75	nw.	10.7	
						500	962.8	10.9	.....	39	5.09	wnw.	7.8	
9:11	969.2	11.3	40	wnw.	7.2	444	969.2	11.3	.....	40	5.36	wnw.	7.2	9/10 St.Cu., wnw.

October 21, 1918.

A. M.														
7:02	962.5	3.4	78	s.	4.9	444	962.5	3.4	.....	78	6.08	s.	4.9	Cloudless.
						500	956.4	4.8	.....	78	6.71	s.	6.0	
						750	928.0	11.2	.....	79	10.51	ssw.	11.0	
7:10	962.3	3.4	78	s.	4.9	917	909.0	15.4	−2.54	80	14.00	ssw.	14.4	
						1,000	899.9	14.8	.....	80	13.46	ssw.	14.4	
						1,250	873.3	12.9	.....	78	11.61	ssw.	14.5	
						1,500	847.8	11.1	.....	76	10.04	ssw.	14.5	
7:29	962.0	3.8	79	s.	4.5	1,674	830.2	9.8	0.74	75	9.09	ssw.	14.6	
						1,750	822.8	9.5	.....	72	8.55	ssw.	14.6	
						2,000	798.0	8.4	.....	64	7.05	ssw.	14.4	
						2,250	774.0	7.3	.....	55	5.63	sw.	14.2	
7:48	961.7	5.0	75	sse.	4.5	2,446	755.8	6.5	0.43	48	4.65	sw.	14.1	
						2,500	750.6	6.3	.....	47	4.49	sw.	14.1	
						2,750	727.9	5.3	.....	41	3.65	sw.	14.2	
						3,000	705.8	4.2	.....	35	2.89	sw.	14.3	
8:02	961.5	5.9	71	sse.	4.5	3,126	695.2	3.7	0.42	32	2.55	sw.	14.4	
						3,000	705.8	4.2	.....	36	2.97	sw.	14.1	
						2,750	727.9	5.3	.....	44	3.92	sw.	13.4	
						2,500	751.0	6.3	.....	52	4.97	sw.	12.8	
						2,250	774.5	7.3	.....	60	6.14	sw.	12.2	
8:07	961.4	6.4	69	sse.	4.5	2,192	779.8	7.6	0.60	62	6.47	sw.	12.0	
						2,000	798.0	8.8	.....	67	7.59	sw.	13.4	
						1,750	822.8	10.2	.....	73	9.09	sw.	15.1	
8:22	961.1	8.0	65	s.	5.8	1,610	836.4	11.1	1.04	77	10.17	sw.	16.1	
						1,500	847.5	12.2	.....	76	10.80	sw.	16.1	
						1,250	871.9	14.8	.....	73	12.29	ssw.	16.0	
10:36	958.6	15.9	62	s.	11.2	1,196	877.0	15.4	−1.14	72	12.60	ssw.	16.0	
						1,000	897.6	13.2	.....	81	12.29	ssw.	14.1	
10:58	958.1	17.0	64	s.	13.4	951	902.5	12.6	1.03	83	12.11	ssw.	13.6	
						750	924.5	14.6	.....	75	12.46	ssw.	13.5	
						500	952.0	17.2	.....	64	12.56	s.	13.4	
11:05	958.0	17.8	62	s.	13.4	444	958.0	17.8	.....	62	12.64	s.	13.4	Cloudless.

October 22, 1918.

A. M.														
9:21	965.2	5.0	62	nnw.	10.3	444	965.2	5.0	.....	62	5.41	nnw.	10.3	4/10 A.Cu., wnw.
						500	958.8	5.0	.....	60	5.23	nnw.	11.3	
						750	930.0	4.8	.....	53	4.56	n.	15.6	
9:25	965.2	5.5	60	nnw.	9.8	971	904.8	4.6	0.08	47	3.99	nne.	19.5	
						1,000	901.9	4.5	.....	46	3.87	nne.	19.2	
						1,250	874.3	3.2	.....	37	2.85	nne.	16.6	
						1,500	847.7	2.0	.....	29	2.05	n.	14.0	
						1,750	821.9	0.8	.....	20	1.29	n.	11.4	
9:55	965.2	7.3	50	n.	11.6	1,781	818.7	0.6	0.49	19	1.21	n.	11.1	
						2,000	796.8	−0.6	.....	18	1.05	n.	10.2	
						2,250	772.2	−1.9	.....	16	0.84	n.	9.1	
						2,500	748.6	−3.3	.....	15	0.70	nnw.	8.1	Few A.C.
11:30	966.1	9.3	39	n.	10.3	2,619	737.3	−3.9	0.52	14	0.62	nnw.	7.6	
						2,500	748.6	−3.3	.....	14	0.65	nnw.	7.8	
						2,250	772.2	−2.1	.....	14	0.67	nnw.	8.2	
						2,000	797.0	−0.6	.....	13	0.76	n.	8.7	
11:58	966.2	9.9	35	n.	9.8	1,832	814.1	0.0	0.53	13	0.79	n.	9.6	
						1,750	822.5	0.4	.....	13	0.82	n.	10.1	
						1,500	848.9	1.8	.....	13	0.90	nne.	13.	
P. M.														
12:14	966.2	10.0	34	n.	9.8	1,342	865.2	2.6	−1.23	13	0.96	nne.	1	
						1,250	875.5	1.5	.....	14	0.95	nne.	1	
12:16	966.2	10.0	34	n.	9.8	1,212	879.3	1.0	0.89	15	0.99	nne.	1	
						1,000	902.7	2.9	.....	21	1.58	nn		

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 22, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
12:24	966.2	10.0	34	nne.	8.9	910	912.9	3.7	1.35	23	1.83	nne.	10.7	
						750	930.7	5.9		26	2.42	nne.	10.1	
						500	959.7	9.2		31	3.61	nne.	9.1	
12:30	966.2	10.0	34	nne.	8.9	444	966.2	10.0		34	4.18	nne.	8.9	Few A.Cu., wnw.

October 23, 1918.

A. M.														
7:00	969.2	3.0	69	ene.	4.5	444	969.2	3.0		69	5.23	ene.	4.5	10/10 St., w.
						500	962.3	3.5		65	5.10	ene.	6.1	
7:03	969.2	3.0	69	ene.	4.0	643	945.8	4.8	−0.90	56	4.82	e.	11.1	
						750	933.3	4.2		54	4.46	e.	10.5	
						1,000	904.8	2.7		48	3.56	ese.	9.0	
						1,250	877.5	1.2		43	2.96	ese.	7.6	
						1,500	850.7	− 0.2		36	2.16	se.	6.1	
8:03	969.2	3.2	68	ene.	5.4	1,575	842.5	− 0.7	0.59	36	2.07	se.	5.7	
						1,750	824.3	− 1.9		35	1.83	se.	5.9	
						2,000	798.5	− 3.7		34	1.52	se.	6.3	
8:54	968.7	4.2	65	ene.	6.7	2,105	787.6	− 4.4	0.70	34	1.43	se.	6.4	10/10 St., sw.
						2,250	773.7	− 5.5		40	1.54	se.	7.0	
						2,500	748.9	− 7.4		50	1.63	sse.	7.9	
8:59	968.6	4.3	65	ene.	5.4	2,626	736.8	− 8.4	0.77	55	1.64	sse.	8.4	
						2,750	725.0	− 7.6		68	2.18	s.	12.3	
9:11	968.5	4.4	64	ene.	5.4	2,879	713.3	− 6.7	−0.67	82	2.85	ssw.	16.4	
						3,000	702.0	− 7.2		83	2.76	ssw.	16.2	
						3,250	680.0	− 8.3		85	2.57	ssw.	15.7	
						3,500	658.5	− 9.3		87	2.40	sw.	15.3	
						3,750	637.0	−10.4		89	2.23	sw.	14.8	
9:22	968.3	4.5	63	ene.	5.8	3,758	636.6	−10.4	0.42	89	2.23	sw.	14.8	
						3,750	637.0	−10.4		89	2.23	sw.	14.8	
						3,500	658.5	− 9.3		90	2.48	sw.	15.1	
						3,250	680.0	− 8.3		91	2.75	sw.	15.4	
						3,000	702.0	− 7.2		92	2.39	ssw.	15.7	
						2,750	725.0	− 6.2		93	3.37	ssw.	16.0	
9:45	968.1	4.7	62	e.	7.2	2,651	733.9	− 5.8	−0.93	93	3.49	ssw.	16.1	
						2,500	748.0	− 5.9		92	3.41	ssw.	15.6	Altitude of St. base about 2,300 m.
						2,250	772.2	− 6.2		91	3.29	s.	14.7	
9:54	968.0	4.9	62	e.	8.5	2,219	775.6	− 6.2	0.63	91	3.29	s.	14.6	
						2,000	797.4	− 4.7		80	3.30	sse.	12.3	
						1,750	823.1	− 3.2		69	3.23	se.	9.9	
10:04	967.9	4.9	62	e.	7.2	1,682	830.2	− 2.8	0.87	66	3.19	se.	9.2	
						1,500	849.5	− 1.2		65	3.59	se.	9.0	
						1,250	876.1	1.0		63	4.14	ese.	8.8	Light rain from 10:10 a. m. to end of flight.
						1,000	903.7	3.1		61	4.65	ese.	8.6	
10:29	967.6	5.1	61	e.	7.2	844	921.3	4.5	0.15	60	5.05	ese.	8.5	
						750	932.1	4.6		60	5.09	ese.	8.3	
						500	960.7	5.0		61	5.32	e.	7.7	
10:36	967.5	5.1	61	e.	7.6	444	967.5	5.1		61	5.36	e.	7.6	10/10 St., sw.

October 24, 1918.

A. M.														
7:01	966.9	0.8	86	wnw.	4.0	444	966.9	0.8		86	5.56	wnw.	4.0	2/10 St.Cu., nw.
						500	960.0	0.4		86	5.41	wnw.	6.1	
7:05	966.9	0.8	86	nw.	4.5	660	941.2	− 0.6	0.65	84	4.88	nw.	12.2	
						750	930.5	− 1.0		83	4.66	nw.	12.4	10/10 St.Cu., nnw.; altitude of St.Cu. base about 900 m.
						1,000	901.5	− 2.0		79	4.08	nw.	12.9	
						1,250	873.7	− 3.0		75	3.56	nnw.	13.4	
						1,500	846.6	− 4.0		72	3.15	nnw.	13.9	
7:30	966.9	1.1	86	nnw.	6.3	1,591	836.8	− 4.4	0.41	70	2.95	nnw.	14.1	
						1,750	820.1	− 4.4		69	2.91	nnw.	15.7	
						2,000	794.4	− 4.4		66	2.79	nnw.	18.0	
7:45	966.9	1.1	84	nnw.	7.2	2,033	791.2	− 4.4	0.00	66	2.79	nnw.	18.5	
						2,250	769.4	− 5.9		57	2.11	nnw.	18.3	
						2,500	745.5	− 7.7		45	1.43	nnw.	18.1	
8:01	966.9	1.3	82	nnw.	5.4	2,554	740.4	− 8.1	0.71	43	1.32	nnw.	18.0	
						2,750	721.9	− 9.3		39	1.08	nnw.	17.6	
						3,000	698.9	−10.8		33	0.80	nnw.	17.2	
						3,250	676.6	−12.3		27	0.57	nw.	16.7	
8:32	966.9	1.4	82	nw.	5.4	3,503	653.9	−13.9	0.63	21	0.38	nw.	16.2	10/10 St. Cu.,'nnw.
						3,250	676.6	−12.3		24	0.51	nw.	16.1	
						3,000	698.9	− 9.6		28	0.75	nw.	16.1	
						2,750	721.9	− 9.9		31	0.81	nw.	16.0	
						2,500	745.0	− 7.3		34	1.12	nw.	15.9	
9:25	966.9	2.4	77	nw.	4.9	2,379	756.8	− 6.6	0.38	36	1.26	nw.	15.9	
						2,250	769.2	− 6.1		40	1.46	nw.	14.9	
						2,000	794.4	− 5.2		48	1.89	nw.	12.8	
						1,750	820.1	− 4.2		56	2.41	nnw.	10.8	
9:50	966.9	3.2	68	nw.	9.8	1,504	846.1	− 3.3	−1.19	64	2.97	nnw.	8.8	7/10 St.Cu., nnw.
9:51	966.9	3.2	68	nw.	9.8	1,361	861.6	− 5.0	0.65	66	2.65	nnw.	9.7	
						1,250	873.7	− 4.3		72	3.07	nnw.	9.7	
						1,000	901.5	− 2.7		85	4.15	nnw.	9.5	
10:08	966.9	3.8	72	nw.	8.9	885	915.2	− 1.9	1.16	91	4.75	nnw.	9.5	
						750	930.5	− 0.3		85	5.07	nnw.	9.3	
						500	960.0	2.5		74	5.41	nw.	9.0	
10:16	966.9	3.2	71	nw.	8.9	444	966.9	3.2		71	5.46	nw.	8.9	10/10 St.Cu., nnw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 25, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:19	970.6	−0.2	81	ne.	4.5	444	970.6	−0.2	.....	81	4.87	ne.	4.5	10/10 St., ne.
						500	963.9	−0.8	.....	82	4.68	ne.	4.8	
7:45	970.6	−0.2	81	ne.	5.4	705	939.2	−3.1	1.11	89	4.19	ne.	5.9	
						750	933.9	−3.4	.....	89	4.09	ne.	6.5	Altitude of St. base about 800 m.
8:06	970.6	−0.1	81	ne.	4.5	927	913.3	−4.5	0.63	90	3.77	ene.	8.9	
						1,000	904.9	−3.7	.....	82	3.67	ene.	8.9	
8:10	970.6	−0.1	81	ne.	4.9	1,136	889.5	−2.1	−1.15	68	3.49	ene.	9.0	
						1,250	876.8	−2.5	.....	64	3.17	ene.	8.1	
						1,500	849.5	−3.5	.....	55	2.51	ene.	6.1	
8:55	970.6	0.3	80	ne.	6.7	1,650	833.5	−4.1	0.40	50	2.16	ene.	4.9	
						1,750	823.1	−4.7	.....	48	1.98	ene.	5.0	
						2,000	797.3	−6.1	.....	44	1.61	ene.	5.1	
						2,250	772.2	−7.5	.....	39	1.26	ene.	5.2	7/10 A.St., nne.; 3/10 St.Cu., ne.
						2,500	747.8	−8.9	.....	35	1.00	ene.	5.3	
9:57	970.6	0.6	77	nne.	8.0	2,609	737.2	−9.5	0.58	33	0.89	ene.	5.4	
						2,500	747.8	−8.9	.....	33	0.94	ene.	5.8	
						2,250	772.2	−7.4	.....	32	1.04	ene.	6.9	
						2,000	797.3	−5.9	.....	31	1.15	ene.	7.9	
10:15	970.7	0.8	74	nne.	7.2	1,917	800.0	−5.4	0.53	31	1.20	ene.	8.2	
						1,750	823.1	−4.5	.....	36	1.51	ene.	8.6	
						1,500	849.5	−3.2	.....	42	1.97	ene.	9.3	
10:40	970.8	0.9	70	nne.	7.2	1,251	876.9	−1.9	−1.11	49	2.56	ene.	9.9	
10:43	970.8	0.9	68	ne.	7.2	1,053	899.0	−4.1	0.43	60	2.60	ne.	8.3	
						1,000	904.9	−3.9	.....	64	2.82	ne.	8.2	
10:49	970.8	1.0	66	ne.	7.2	818	926.2	−3.1	1.10	77	5.06	ne.	7.8	
						750	933.9	−2.7	.....	75	3.66	ne.	7.6	
						500	963.9	0.4	.....	68	4.28	ne.	6.9	
10:56	970.9	1.0	66	ne.	6.7	444	970.9	1.0	.....	66	4.34	ne.	6.7	9/10 A.St., nne.; 1/10 St.Cu., ne.

October 26, 1918.

A. M.														
7:23	973.3	−2.0	84	n.	5.4	444	973.3	−2.0	.....	84	4.34	n.	5.4	10/10 St., nnw.
						500	966.4	−2.6	.....	86	4.23	n.	5.6	
7:35	973.3	−2.0	84	n.	5.4	581	956.6	−3.5	1.09	89	4.06	n.	5.9	
						750	936.2	−5.2	.....	98	3.86	n.	6.0	
7:59	973.3	−1.8	83	n.	6.3	774	933.5	−5.4	0.85	99	3.84	n.	6.0	
						750	936.3	−5.2	.....	99	3.90	n.	5.9	
9:17	973.3	−1.8	83	n.	4.0	497	966.6	−3.4	3.02	94	4.32	n.	4.5	
9:18	973.3	−1.8	83	n.	4.0	444	973.3	−1.8	.....	83	4.37	n.	4.0	10/10 St., n.

October 27, 1918.

P. M.														
12:13	957.2	−0.4	81	nne.	5.8	444	957.2	−0.4	.....	81	4.79	nne.	5.8	10/10 St., nne.
						500	950.5	−1.1	.....	84	4.68	nne.	6.1	
						750	920.5	−4.4	.....	99	4.18	nne.	7.2	
12:48	956.6	0.1	79	nne.	8.9	760	919.3	−4.5	1.30	100	4.19	nne.	7.3	
						1,000	891.0	−1.2	.....	85	4.70	nne.	12.4	Altitude of St. base about 800 m.
2:00	955.0	0.0	81	nne.	7.2	1,098	879.4	0.2	−1.39	78	4.84	nne.	14.5	
						1,250	862.2	−0.1	.....	72	4.36	nne.	13.7	
						1,500	835.0	−0.6	.....	63	3.66	nne.	12.3	
						1,750	809.0	−1.1	.....	53	2.95	ne.	10.9	
						2,000	784.6	−1.6	.....	43	2.30	ne.	9.5	
2:17	954.5	0.0	82	ene.	8.9	2,055	779.6	−1.7	0.20	41	2.17	ne.	9.2	
						2,250	760.7	−2.1	.....	40	2.05	ne.	9.3	
						2,500	737.2	−2.5	.....	38	1.88	ne.	9.4	
						2,750	714.5	−3.0	.....	37	1.76	ne.	9.6	
2:55	953.4	−0.2	85	nne.	8.9	3,002	691.1	−3.5	0.19	35	1.60	ne.	9.7	
						2,750	714.5	−3.0	.....	37	1.76	ne.	9.9	
						2,500	737.2	−2.5	.....	39	1.93	nne.	10.1	
						2,250	760.7	−2.1	.....	41	2.10	nne.	10.3	
3:04	953.2	−0.3	85	nne.	8.9	2,065	778.1	−1.7	0.34	42	2.23	nne.	10.4	
						2,000	784.6	−1.5	.....	43	2.32	nne.	10.4	
						1,750	809.0	−0.6	.....	48	2.79	nne.	10.2	
						1,500	834.7	0.2	.....	52	3.22	nne.	10.0	
						1,250	861.0	1.0	.....	57	3.74	nne.	9.7	
3:22	952.7	−0.4	85	nne.	8.9	1,080	879.4	1.6	−1.61	60	4.12	nne.	9.6	
						1,000	888.3	0.3	.....	69	4.31	nne.	9.5	
						750	916.5	−3.7	.....	98	4.39	n.	9.3	
3:32	952.4	−0.4	85	n.	8.9	739	917.7	−3.9	1.19	100	4.41	n.	9.3	
						500	946.0	−1.1	.....	88	4.90	n.	9.0	
3:37	952.3	−0.4	85	n.	8.9	444	952.3	−0.4	.....	85	5.02	n.	8.9	10/10 St., nne.

October 28, 1918 (No. 1).

A. M.														
7:56	943.2	−5.0	98	wnw.	3.6	444	943.2	−5.0	.....	98	3.93	wnw.	3.6	Dense fog became light at 7:15 and ended at 7:30 a. m.
						500	936.5	−4.0	.....	94	4.11	wnw.	4.3	
8:21	943.1	−5.0	94	nw.	3.1	650	918.9	−1.5	−1.70	84	4.53	nw.	6.1	
						750	907.0	−1.1	.....	80	4.46	nw.	6.7	
						1,000	878.8	0.0	.....	68	4.15	nnw.	8.2	
8:34	943.0	−4.6	90	nw.	3.6	1,240	853.3	1.1	−0.44	57	3.77	nnw.	9.6	
						1,250	852.1	1.1	.....	56	3.71	nnw.	9.6	
						1,500	826.4	1.1	.....	39	2.58	nw.	9.9	

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 25, 1918 (No. 1)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:04	942.8	−3.1	83	nnw.	2.2	1,738	802.2	1.1	0.00	22	1.46	nw.	10.2	
						1,750	801.0	1.0	.....	22	1.45	nw.	10.2	
						2,000	776.4	−0.2	.....	21	1.26	nw.	9.6	
						2,250	752.4	−1.5	.....	19	1.02	nw.	9.1	
9:39	942.8	−1.8	79	nnw.	3.6	2,460	732.9	−2.5	0.50	18	0.89	nw.	8.6	
						2,500	729.1	−2.7	.....	18	0.88	nw.	8.6	
						2,750	706.9	−4.3	.....	14	0.60	nw.	8.9	
						3,000	685.1	−5.8	.....	11	0.41	nw.	9.2	
11:27	943.4	5.5	61	nnw.	2.2	3,027	682.8	−6.0	0.52	11	0.40	nw.	9.2	
						3,000	685.1	−5.9	.....	11	0.41	nw.	9.2	
						2,750	706.9	−4.9	.....	11	0.45	nw.	9.6	
						2,500	729.4	−3.8	.....	11	0.49	nw.	10.0	
						2,250	753.2	−2.8	.....	11	0.53	nw.	10.3	
						2,000	777.5	−1.7	.....	11	0.58	nw.	10.7	
11:54	943.2	7.2	56	nnw.	3.1	1,870	790.0	−1.2	0.34	11	0.61	nw.	10.9	
						1,750	802.0	−0.8	.....	12	0.69	nw.	10.1	
						1,500	827.0	0.1	.....	15	0.92	nw.	8.4	
						1,250	853.0	0.9	.....	17	1.11	nnw.	6.7	
						1,000	880.5	1.8	.....	20	1.39	nnw.	5.0	
P. M.														
12:26	943.0	8.9	44	nnw.	6.3	904	891.3	2.1	1.46	21	1.49	nnw.	4.3	
						750	908.4	4.3	.....	29	2.41	nnw.	4.4	
						500	936.3	8.0	.....	41	4.40	nnw.	4.5	
12:38	942.9	8.8	44	nnw.	4.5	444	942.9	8.8	.....	44	4.99	nnw.	4.5	2/10 A.Cu., nw.

October 28, 1918 (No. 2).

P. M.														
1:03	942.8	9.0	41	nnw.	6.3	444	942.8	9.0	.....	41	4.71	nnw.	6.3	2/10 A.Cu., nw.
						500	936.1	8.2	.....	42	4.57	nnw.	6.2	
1:19	942.9	9.0	41	nnw.	5.8	714	912.3	5.3	1.37	45	4.01	nw.	6.0	
						750	908.6	5.1	.....	45	3.96	nw.	6.1	
						1,000	881.4	3.3	.....	48	3.72	nw.	7.0	
						1,250	854.9	1.5	.....	50	3.40	nw.	7.9	Few A.Cu., nw.
2:30	943.4	10.0	39	nnw.	5.3	1,314	847.9	1.0	0.81	51	3.35	nw.	8.1	
						1,250	854.9	1.6	.....	50	3.43	nw.	7.8	
						1,000	881.4	3.8	.....	48	3.85	nw.	6.7	
						750	908.6	6.1	.....	46	4.33	nw.	5.7	
2:47	943.4	10.0	38	nnw.	4.9	735	910.7	6.2	1.37	46	4.36	nw.	5.6	
						500	937.2	9.4	.....	40	4.72	nnw.	5.4	
2:55	943.5	10.2	38	nnw.	5.4	444	943.5	10.2	.....	38	4.73	nnw.	5.4	Few A.Cu., nw.

October 29, 1918.

A. M.														
8:05	953.3	0.0	74	w.	2.7	444	953.3	0.0	.....	74	4.54	w.	2.7	10/10 St., nnw.
						500	946.9	0.4	.....	70	4.40	w.	3.6	
						750	918.0	2.1	.....	52	3.70	wnw.	7.9	
8:11	953.4	0.4	74	w.	2.2	942	896.2	3.4	−0.68	38	2.96	nw.	11.1	
						1,000	889.8	3.0	.....	38	2.88	nw.	10.8	
						1,250	862.6	1.5	.....	36	2.45	nw.	9.4	
						1,500	836.3	− 0.1	.....	35	2.12	nw.	8.1	9/10 A.St., nw.
8:31	953.5	0.5	75	w.	1.3	1,604	825.5	− 0.7	0.62	34	1.96	nw.	7.5	
						1,750	810.8	− 1.3	.....	34	1.86	nw.	9.2	
						2,000	785.9	− 2.4	.....	35	1.75	nw.	12.2	
8:42	953.6	0.8	75	w.	1.3	2,031	782.6	− 2.5	0.42	35	1.74	nw.	12.6	
						2,250	761.6	− 3.9	.....	62	2.73	nw.	13.9	
9:00	953.7	2.0	68	wnw.	4.0	2,375	749.6	− 4.7	0.64	78	3.21	nw.	14.6	
						2,500	737.8	− 5.5	.....	80	3.07	nw.	14.3	Altitude of A.St. base about 2,400 m.
						2,750	714.5	− 7.0	.....	83	2.87	nw.	13.8	
						3,000	691.7	− 8.6	.....	90	2.65	nw.	13.3	
						3,250	669.2	−10.2	.....	95	2.42	nw.	12.7	
9:32	953.9	3.0	66	nw.	6.3	3,306	664.6	−10.5	0.62	96	2.38	nw.	12.6	
						3,250	669.2	−10.1	.....	96	2.47	nw.	12.4	
						3,000	691.7	− 8.6	.....	96	2.82	nw.	11.3	10/10 A.St., nw.
						2,750	714.5	− 7.0	.....	96	3.24	nw.	10.2	
						2,500	737.8	− 5.4	.....	96	3.72	nw.	9.1	
11:00	954.3	4.0	74	nw.	8.0	2,353	751.1	− 4.5	0.34	96	4.02	nw.	8.5	4/10 A.St., nw.; 6/10 St.Cu., nw.
						2,250	761.6	− 4.1	.....	97	4.20	nw.	8.4	
						2,000	785.9	− 3.3	.....	98	4.55	nw.	8.2	
						1,750	810.9	− 2.4	.....	100	5.00	nw.	8.0	
11:11	954.3	4.4	77	nw.	7.6	1,742	811.6	− 2.4	0.42	100	5.00	nw.	8.0	
						1,500	837.0	− 1.4	.....	74	4.03	nw.	8.0	
11:23	954.3	5.0	75	nnw.	8.5	1,312	856.6	− 0.6	0.11	53	3.08	nw.	8.0	
						1,250	863.3	− 0.5	.....	59	3.46	nw.	8.1	
						1,000	890.6	− 0.3	.....	85	5.13	nw.	8.6	
11:36	954.3	4.8	75	nw.	8.0	864	905.9	− 0.1	1.21	100	6.06	nw.	8.9	Altitude of St.Cu. base about 900 m.
						750	919.1	1.3	.....	93	6.24	nw.	8.7	
						500	947.9	4.3	.....	78	6.48	nw.	8.1	
11:45	954.3	5.0	75	nw.	8.0	444	954.3	5.0	.....	75	6.54	nw.	8.0	10/10 St.Cu., nw.

TABLE 11.—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 30, 1918, series (No. 1).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:26	960.7	2.2	71	nw.	5.4	444	960.7	2.2	.....	71	5.08	nw.	5.4	10/10 St.Cu., nw.
						500	953.7	1.8	.....	72	5.01	nw.	6.4	
						750	924.3	−0.3	.....	78	4.65	nnw.	11.1	
7:33	960.8	2.1	72	nw.	5.8	912	906.1	−1.6	0.81	82	4.39	nnw.	14.1	
						1,000	896.0	−2.1	.....	83	4.26	nnw.	15.1	
						1,250	868.1	−3.5	.....	86	3.92	nnw.	18.1	Altitude of St.Cu. base about 1,350 m.
						1,500	841.0	−4.9	.....	88	3.56	nw.	21.1	
7:53	961.0	2.2	72	nw.	6.3	1,645	826.1	−5.7	0.56	90	3.40	nw.	22.8	
						1,750	814.7	−6.2	.....	88	3.19	nw.	22.2	
						2,000	789.4	−7.3	.....	85	2.80	nw.	20.8	
						2,250	764.8	−8.4	.....	81	2.42	nw.	19.4	
8:14	961.3	2.2	72	nw.	6.7	2,472	743.1	−9.4	0.48	78	2.14	nw.	18.2	
						2,250	765.0	−8.3	.....	80	2.42	nw.	18.7	
						2,000	789.9	−7.0	.....	82	2.77	nw.	19.2	
8:32	961.5	2.5	72	nw.	8.0	1,856	804.7	−6.2	0.41	83	3.00	nw.	19.5	
						1,750	815.3	−5.8	.....	85	3.19	nw.	18.9	
						1,500	841.9	−4.7	.....	89	3.67	nnw.	17.6	
8:50	961.7	2.8	72	nnw.	8.0	1,276	866.5	−3.8	0.61	93	4.13	nnw.	16.4	
						1,250	869.2	−3.6	.....	93	4.20	nnw.	16.2	
						1,000	897.3	−2.1	.....	94	4.82	nnw.	14.3	
8:59	961.8	2.8	72	nnw.	9.8	851	914.2	−1.2	0.98	94	5.20	nnw.	13.1	
						750	925.9	−0.2	.....	89	5.35	nnw.	12.3	
						500	955.0	2.2	.....	75	5.37	nnw.	10.3	
9:03	961.8	2.8	72	nnw.	9.8	444	961.8	2.8	.....	72	5.38	nnw.	9.8	9/10 St.Cu., nw.

October 30, 1918, series (No. 2).

A. M.														
9:46	961.8	2.5	72	nnw.	9.8	444	961.8	2.5	.....	72	5.26	nnw.	9.8	10/10 St.Cu., nw.
						500	954.9	1.9	.....	72	5.05	nnw.	10.1	
						750	925.8	− 0.8	.....	74	4.23	nnw.	11.5	
9:53	961.8	2.5	72	nnw.	8.5	765	924.1	− 1.0	1.16	74	4.16	nnw.	11.6	
						1,000	897.3	− 2.8	.....	81	3.92	nnw.	14.2	Altitude of St.Cu. base about 1,200 m.
						1,250	869.1	− 4.9	.....	88	3.56	nw.	16.9	
10:07	961.8	2.5	72	nnw.	7.2	1,355	857.6	− 5.6	0.78	91	3.47	nw.	18.1	
						1,500	841.5	− 6.2	.....	89	3.22	nw.	17.5	6/10 St.Cu., nw.
						1,750	815.0	− 7.2	.....	86	2.86	nw.	16.3	
						2,000	789.7	− 8.2	.....	83	2.52	nw.	15.2	
						2,250	764.7	− 9.2	.....	80	2.23	nw.	14.1	
						2,500	740.2	−10.2	.....	76	1.94	nw.	12.9	
10:29	961.7	3.9	63	nnw.	12.5	2,524	737.9	−10.3	0.40	76	1.92	nw.	12.8	
						2,750	716.2	−12.3	.....	78	1.65	nw.	12.1	6/10 A.Cu., wnw.; 3/10 St.Cu., nw.
						3,000	693.0	−14.5	.....	80	1.38	nw.	11.3	
						3,250	670.8	−16.8	.....	82	1.14	nw.	10.5	
						3,500	649.0	−19.0	.....	83	0.94	nw.	9.9	10/10 St.Cu., nw.
P. M.														
12:04	961.8	4.2	55	nnw.	11.2	3,568	643.1	−19.6	0.82	84	0.90	nw.	9.5	
						3,500	649.0	−19.1	.....	84	0.94	nw.	9.6	
						3,250	670.8	−17.2	.....	84	1.13	nw.	10.2	
						3,000	693.0	−15.3	.....	85	1.36	nw.	10.7	
12:30	961.8	4.3	56	nnw.	11.2	2,850	707.1	−14.2	0.64	85	1.51	nw.	11.0	
						2,750	716.2	−13.6	.....	85	1.60	nw.	11.4	
						2,500	740.2	−12.0	.....	87	1.89	nw.	12.3	
						2,250	764.7	−10.4	.....	88	2.21	nw.	13.2	
						2,000	789.7	− 8.8	.....	89	2.57	nw.	14.1	
12:57	961.8	4.0	60	nnw.	8.9	1,939	796.2	− 8.4	0.58	89	2.66	nw.	14.3	
						1,750	815.7	− 7.3	.....	91	2.99	nw.	13.3	
						1,500	842.5	− 5.9	.....	93	3.45	nnw.	11.9	Altitude of St.Cu. base about 1,300 m.
						1,250	869.5	− 4.4	.....	95	4.01	nnw.	10.5	
1:12	961.9	3.8	60	nw.	9.8	1,161	879.5	− 3.9	0.75	96	4.23	nnw.	10.0	
						1,000	897.3	− 2.6	.....	92	4.53	nnw.	10.4	
1:27	962.1	4.0	58	nw.	9.8	796	920.9	− 1.0	1.42	85	4.78	nw.	11.0	
						750	925.8	− 0.4	.....	81	4.79	nw.	10.7	
						500	955.5	3.2	.....	62	4.77	nw.	9.2	
1:37	962.2	4.0	58	nw.	8.9	444	962.2	4.0	.....	58	4.72	nw.	8.9	10/10 St.Cu., nnw.

October 30, 1918, series (No. 3).

P. M.														
1:57	962.5	3.0	69	nw.	8.9	444	962.5	3.0	.....	69	5.23	nw.	8.9	10/10 St.Cu., nnw.
						500	955.5	2.5	.....	70	5.12	nw.	9.1	
						750	926.6	0.4	.....	75	4.72	nw.	9.8	
2:05	962.6	3.0	69	nw.	8.9	866	913.4	− 0.7	0.84	78	4.49	nw.	10.2	
						1,000	897.9	− 1.8	.....	81	4.26	nnw.	10.2	
						1,250	870.0	− 3.9	.....	86	3.79	nnw.	10.2	
2:20	962.8	2.6	70	nw.	10.3	1,395	854.5	− 5.1	0.83	89	3.54	n.	10.2	Altitude of St.Cu. base about 1,000 m.
						1,500	843.0	− 5.7	.....	88	3.33	n.	10.4	
						1,750	816.7	− 7.2	.....	87	2.89	nnw.	11.0	
2:46	963.3	2.8	70	nw.	8.5	1,953	795.8	− 8.4	0.59	85	2.54	nnw.	11.5	
						2,000	791.0	− 8.7	.....	84	2.44	nnw.	11.5	
						2,250	766.0	−10.2	.....	81	2.07	nnw.	11.3	
						2,500	741.6	−11.8	.....	78	1.72	nnw.	11.2	
						2,750	717.7	−13.4	.....	75	1.43	nnw.	11.0	
3:38	963.9	2.9	70	nw.	11.6	2,918	701.8	−14.4	0.60	73	1.27	nnw.	10.9	9/10 St.Cu., nnw.
						2,750	717.7	−13.4	.....	75	1.43	nnw.	11.0	
						2,500	741.6	−12.0	.....	77	1.67	nnw.	11.2	
						2,250	766.0	−10.6	.....	80	1.97	nnw.	11.4	
						2,000	791.7	− 9.2	.....	83	2.32	nnw.	11.6	

TABLE 11—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 30, 1918, series (No. 3)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
4:17	964.5	2.9	69	nw.	10.3	1,988	792.8	− 9.1	0.55	83	2.33	nnw.	11.6	
						1,750	817.8	− 7.8		85	2.68	nnw.	12.2	
						1,500	844.8	− 6.4		86	3.06	nnw.	12.9	
4:50	965.0	3.0	63	nnw.	10.7	1,283	868.6	− 5.2	0.80	88	3.47	nnw.	13.5	
						1,250	872.2	− 4.9		87	3.53	nnw.	13.4	
						1,000	900.1	− 2.7		80	3.90	nnw.	13.0	
5:06	965.3	2.9	60	nnw.	9.8	788	924.9	− 0.8	1.02	74	4.23	nnw.	12.6	
						750	928.0	− 0.4		72	4.26	nnw.	12.5	
						500	958.7	2.1		62	4.41	nnw.	11.8	
5:16	965.4	2.7	59	nnw.	11.6	444	965.4	2.7		59	4.38	nnw.	11.6	10/10 St.Cu., nnw.

October 30, 1918, series (No. 4).

P. M.														
5:43	965.7	2.2	64	nnw.	14.8	444	965.7	2.2		64	4.58	nnw.	14.8	10/10 St.Cu., nnw.
						500	958.9	1.8		64	4.45	nnw.	14.8	
						750	929.5	− 0.1		66	4.00	nnw.	14.9	
5:52	965.8	1.7	68	nnw.	13.4	944	907.3	− 1.5	0.74	68	3.67	nnw.	14.9	
						1,000	901.0	− 2.0		69	3.57	nnw.	14.6	
						1,250	873.1	− 4.1		72	3.12	nnw.	13.3	
						1,500	846.0	− 6.1		76	2.77	nnw.	12.0	
6:12	966.1	1.1	78	nnw.	13.0	1,627	832.1	− 7.2	0.83	78	2.59	nnw.	11.3	
						1,750	819.0	− 8.0		78	2.42	nnw.		
						2,000	792.8	− 9.5		78	2.11	nnw.		
6:37	966.5	0.3	66	nnw.	14.3	2,137	778.9	−10.3	0.59	78	1.97	nnw.	(*)	10/10 St.Cu., nnw.
						2,000	792.8	− 9.5		78	2.11	nnw.		
						1,750	819.0	− 8.1		79	2.43	nnw.		
						1,500	846.0	− 6.7		80	2.78	nnw.		
7:52	967.2	−0.4	67	nnw.	12.5	1,413	855.3	− 6.2	0.45	80	2.90	nnw.	(*)	Light snow from 7:50 to 8:20 p. m.
						1,250	874.0	− 5.5		81	3.11	nnw.		
						1,000	902.3	− 4.3		82	3.49	nnw.		
8:31	967.2	0.1	71	nnw.	9.4	882	915.4	− 3.8	0.91	82	3.64	nnw.	(*)	
						750	930.7	− 2.6		82	4.03	nnw.		
						500	960.5	− 0.3		81	4.83	nnw.		
9:09	967.3	0.2	81	nnw.	11.2	444	967.3	0.2		81	5.02	nnw.	11.2	10/10 St.Cu., nnw.

October 30–31, 1918, series (No. 5).

P. M.														
9:50	967.5	0.1	72	nnw.	9.8	444	967.5	0.1		72	4.43	nnw.	9.8	10/10 St.Cu., nnw.
						500	960.6	− 0.3		72	4.29	nnw.	10.1	
						750	930.8	− 2.1		72	3.69	nnw.	11.4	
9:59	967.6	0.1	74	nnw.	9.8	925	910.8	− 3.3	0.71	72	3.34	nnw.	12.4	
						1,000	902.0	− 3.8		72	3.20	nnw.	12.3	
						1,250	874.2	− 5.6		73	2.78	nnw.	12.0	
						1,500	846.5	− 7.4		74	2.41	nnw.	11.7	
10:21	967.7	0.1	74	nnw.	8.5	1,571	838.8	− 7.9	0.71	74	2.31	nnw.	11.6	
						1,750	819.6	− 9.5		74	2.01	nnw.		
10:38	967.8	0.0	74	nnw.	8.5	1,992	794.6	−11.6	0.88	75	1.69	nnw.	(*)	
						2,000	793.7	−11.5		75	1.70	nnw.		
11:02	967.9	0.1	73	nnw.	8.5	2,208	772.1	− 9.3	−0.72	76	2.10	nnw.	(*)	Light snow from 11:00 to 11:20 p. m.
						2,000	793.1	−10.1		77	1.98	nnw.		
11:32	968.1	0.1	75	nnw.	8.5	1,860	808.2	−10.6	0.62	77	1.89	nnw.	(*)	10/10 St.Cu., nnw.
						1,750	819.6	− 9.9		77	2.02	nnw.		
						1,500	846.5	− 8.4		77	2.30	nnw.		
A. M.														
12:05	968.2	0.1	76	nnw.	8.5	1,390	858.9	− 7.7	0.74	77	2.45	nnw.	(*)	
						1,250	874.2	− 6.7		78	2.71	nnw.		
						1,000	903.0	− 4.8		80	3.26	nnw.		Light snow began at 12:40 a. m. and continued.
12:36	968.6	0.2	71	nnw.	8.5	794	926.9	− 3.3	1.00	81	3.76	nnw.	(*)	
						750	932.2	− 2.9		80	3.84	nnw.		
						500	961.8	− 0.4		73	4.31	nnw.		
1:10	968.7	0.2	71	nnw.	7.6	444	968.7	0.2		71	4.40	nnw.	7.6	10/1 0St., nnw.

October 31, 1918, series (No. 6).

A. M.														
1:39	969.0	0.0	76	nnw.	8.9	444	969.0	0.0		76	4.64	nnw.	8.9	10/10 St., nnw.
						500	962.2	−0.4		75	4.43	nnw.	9.2	Light snow continued from previous flight.
						750	932.5	−2.0		72	3.72	nnw.	10.8	
1:47	969.1	0.0	76	nnw.	8.9	861	919.7	−2.7	0.65	71	3.46	nnw.	11.5	
						1,000	903.9	−3.9		72	3.18	nnw.	(*)	
						1,250	875.7	−6.0		74	2.72	nnw.	(*)	
						1,500	847.9	−8.1		76	2.33	nnw.	(*)	
3:28	969.6	−0.3	72	nnw.	6.7	1,607	836.3	−9.0	0.78	77	2.19	nnw.	(*)	
						1,500	847.9	−8.2		77	2.34	nnw.	(*)	
						1,250	875.7	−6.4		77	2.74	nnw.	(*)	
						1,000	903.9	−4.6		77	3.20	nnw.	(*)	
3:45	969.6	−0.3	69	nnw.	6.7	864	919.7	−3.6	0.79	77	3.48	nnw.	(*)	
						750	932.5	−2.7		76	3.71	nnw.	(*)	
						500	962.2	−0.7		74	4.26	nnw.	(*)	
3:52	969.6	−0.3	73	nnw.	5.8	444	969.6	−0.3		73	4.35	nnw.	5.8	10/10 St., nnw.

*Instrument did not record.

TABLE 11—*Free-air data from kite flights at Ellendale Aerological Station, October, 1918*—Continued.

October 31, 1918, series (No. 7).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
4:39	939.6	−0.5	68	nnw.	4.9	444	939.6	−0.5	.....	68	3.98	nnw.	4.9	10/10 St., nnw.
.....	.....	.....	.....	.....	.....	500	932.8	−1.0	.....	69	3.88	nnw.	(*)	
.....	.....	.....	.....	.....	.....	750	933.0	−3.2	.....	74	3.46	nnw.	(*)	
4:54	939.6	−0.5	68	nnw.	4.0	840	922.6	−4.0	0.88	76	3.32	nnw.	(*)	
.....	.....	.....	.....	.....	.....	1,000	903.8	−5.4	.....	76	2.95	nnw.	(*)	Light snow ended at 5:00 a. m.
5:50	939.8	−0.7	70	nnw.	4.5	1,250	875.0	−7.5	.....	77	2.49	nnw.	(*)	
.....	.....	.....	.....	.....	.....	1,439	854.4	−9.1	0.85	77	2.16	nnw.	(*)	
6:12	939.9	−0.9	70	nnw.	3.1	1,500	847.8	−7.7	.....	67	2.13	nnw.	(*)	
.....	.....	.....	.....	.....	.....	1,583	838.9	−5.9	−2.22	53	1.97	nnw.	(*)	
.....	.....	.....	.....	.....	.....	1,750	820.7	−6.5	.....	54	1.91	nnw.	(*)	
.....	.....	.....	.....	.....	.....	2,000	794.8	−7.5	.....	55	1.78	nnw.	(*)	
.....	.....	.....	.....	.....	.....	2,250	769.6	−8.4	.....	57	1.70	nnw.	(*)	
6:37	939.9	−1.5	70	nnw.	4.5	2,500	745.3	−9.4	.....	58	1.59	nnw.	(*)	
.....	.....	.....	.....	.....	.....	2,614	734.7	−9.8	0.38	59	1.56	nnw.	13.4	
.....	.....	.....	.....	.....	.....	2,750	721.7	−10.0	.....	52	1.35	nnw.	14.6	
.....	.....	.....	.....	.....	.....	3,000	698.7	−10.5	.....	39	0.97	nnw.	16.9	
7:20	939.9	−1.8	71	n.	3.6	3,057	693.8	−10.6	0.28	36	0.89	nnw.	17.4	
.....	.....	.....	.....	.....	.....	3,000	698.9	−10.4	.....	36	0.90	nnw.	16.8	
.....	.....	.....	.....	.....	.....	2,750	722.3	−9.4	.....	37	1.01	nnw.	14.0	
.....	.....	.....	.....	.....	.....	2,500	746.4	−8.5	.....	38	1.12	nnw.	11.2	
7:32	939.9	−1.7	71	n.	3.1	2,250	770.8	−7.5	.....	40	1.29	nnw.	8.5	9/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	2,173	778.0	−7.2	0.56	40	1.33	nnw.	7.6	
.....	.....	.....	.....	.....	.....	2,000	795.8	−6.2	.....	36	1.30	nnw.	8.8	
7:40	939.9	−1.7	71	n.	3.6	1,750	821.1	−4.8	.....	30	1.22	nnw.	10.4	
.....	.....	.....	.....	.....	.....	1,610	835.8	−4.0	−1.32	27	1.18	nnw.	11.4	
7:46	939.9	−1.7	71	n.	4.0	1,500	847.8	−5.5	.....	39	1.50	nnw.	11.8	
.....	.....	.....	.....	.....	.....	1,269	873.1	−8.5	0.75	65	1.92	wnw.	12.6	
.....	.....	.....	.....	.....	.....	1,250	875.0	−8.4	.....	66	1.97	wnw.	12.4	
7:54	939.9	−1.5	71	n.	3.1	1,000	903.8	−6.5	.....	73	2.58	nnw.	9.4	
.....	.....	.....	.....	.....	.....	881	917.7	−5.6	0.94	76	2.90	nnw.	8.0	
.....	.....	.....	.....	.....	.....	750	933.0	−3.4	.....	74	3.40	nnw.	6.5	
.....	.....	.....	.....	.....	.....	500	952.8	−2.0	.....	71	3.67	n.	3.7	
8:04	939.9	−1.5	70	n.	3.1	444	939.9	−1.5	.....	70	3.77	n.	3.1	9/10 St.Cu., nnw.

October 31, 1918, series (No. 8).

A. M.														
8:30	939.9	−1.0	66	n.	7.6	444	939.9	−1.0	.....	66	3.71	n.	7.6	9/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	500	933.0	−1.5	.....	67	3.61	n.	8.0	
.....	.....	.....	.....	.....	.....	750	933.0	−3.9	.....	73	3.22	nnw.	9.8	
8:35	939.9	−1.0	66	nnw.	8.0	870	919.1	−5.1	0.96	76	3.02	nnw.	10.7	
.....	.....	.....	.....	.....	.....	1,000	904.0	−6.8	.....	90	3.10	nnw.	8.0	
9:12	939.8	−0.6	58	n.	6.3	1,063	893.6	−7.6	1.30	97	3.11	nnw.	6.7	Altitude of St.Cu. base about 1,300 m.
.....	.....	.....	.....	.....	.....	1,250	875.0	−7.7	.....	51	1.62	n.	6.9	7/10 St.Cu., nnw.
10:13	939.5	0.7	60	nnw.	8.9	1,326	866.7	−7.7	0.04	33	1.05	n.	7.0	
10:17	939.5	0.8	59	nnw.	6.7	1,425	855.8	−4.2	−3.54	27	1.16	n.	5.9	
.....	.....	.....	.....	.....	.....	1,500	847.3	−4.4	.....	27	1.14	n.	6.1	
.....	.....	.....	.....	.....	.....	1,750	820.8	−5.2	.....	26	1.02	n.	6.9	
.....	.....	.....	.....	.....	.....	2,000	795.3	−6.0	.....	26	0.96	n.	7.7	
10:22	939.5	0.9	59	nnw.	6.7	2,204	774.9	−6.7	0.35	25	0.87	n.	8.3	2/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	2,000	795.3	−6.0	.....	24	0.88	n.	7.8	
.....	.....	.....	.....	.....	.....	1,750	820.8	−5.0	.....	24	0.96	n.	7.1	
10:32	939.4	0.8	57	n.	6.3	1,538	843.4	−4.2	−1.86	23	0.99	n.	6.6	
.....	.....	.....	.....	.....	.....	1,500	847.3	−4.9	.....	24	0.97	n.	6.6	
10:37	939.4	0.9	57	n.	4.5	1,339	865.1	−7.9	0.83	30	0.94	n.	6.5	
.....	.....	.....	.....	.....	.....	1,250	875.0	−7.1	.....	39	1.31	n.	6.3	
.....	.....	.....	.....	.....	.....	1,000	904.0	−5.1	.....	62	2.47	nnw.	5.9	
10:56	939.2	1.8	51	nnw.	7.2	868	919.1	−4.0	1.37	74	3.23	nnw.	5.7	
.....	.....	.....	.....	.....	.....	750	933.0	−2.4	.....	69	3.45	nnw.	5.4	
.....	.....	.....	.....	.....	.....	500	952.5	1.0	.....	59	3.88	nw.	4.7	
11:05	939.2	1.8	57	nw.	4.5	444	939.2	1.8	.....	57	3.97	nw.	4.5	1/10 St.Cu., nnw.

*Instrument did not record.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918.*

November 1, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
7:54	963.2	−8.0	97	ssw.	4.9	444	963.2	− 8.0	.....	97	3.01	ssw.	4.9	Few A.Cu., wnw.
						500	956.2	− 6.6	.....	92	3.22	ssw.	6.0	
						750	926.3	− 0.1	.....	71	4.30	ssw.	10.8	
7:58	963.1	−7.5	97	ssw.	4.9	883	911.2	3.3	−2.57	59	4.57	ssw.	13.4	
						1,000	899.0	4.2	.....	57	4.70	sw.	12.0	
8:19	963.0	−5.7	95	ssw.	4.0	1,236	872.9	6.1	−0.79	53	4.99	w.	9.1	
						1,250	871.3	6.0	.....	53	4.96	w.	9.1	
						1,500	845.2	4.5	.....	54	4.55	w.	10.0	
						1,750	819.4	3.0	.....	55	4.17	w.	10.9	
						2,000	794.1	1.4	.....	57	3.92	wnw.	11.8	
						2,250	769.8	− 0.1	.....	58	3.51	wnw.	12.7	
8:47	962.9	−4.6	95	sw.	3.6	2,283	766.8	− 0.3	0.61	58	3.46	wnw.	12.8	
						2,500	745.8	− 2.0	.....	60	3.10	wnw.	13.9	
						2,750	722.4	− 4.0	.....	62	2.71	wnw.	15.2	
						3,000	699.9	− 6.0	.....	64	2.36	wnw.	16.4	
						3,250	678.3	− 8.0	.....	66	2.05	wnw.	17.7	
9:13	962.6	−0.8	86	ssw.	4.0	3,260	676.9	− 8.2	0.80	66	2.01	wnw.	17.8	
						3,500	657.0	− 9.3	.....	59	1.63	wnw.	17.9	
						3,750	636.1	−10.4	.....	52	1.31	wnw.	18.1	
						4,000	616.0	−11.6	.....	44	0.99	nw.	18.2	Cloudless.
						4,250	596.1	−12.8	.....	37	0.75	nw.	18.4	
						4,500	576.5	−13.9	.....	29	0.53	nw.	18.5	
9:52	962.2	1.3	66	ssw.	5.8	4,511	575.5	−14.0	0.50	29	0.52	nw.	18.5	
						4,500	576.5	−13.9	.....	29	0.53	nw.	18.5	
						4,250	596.1	−12.6	.....	28	0.57	nw.	18.3	
						4,000	616.0	−11.2	.....	27	0.63	nw.	18.1	
						3,750	636.1	− 9.8	.....	27	0.71	nnw.	17.9	
						3,500	656.8	− 8.4	.....	26	0.78	nnw.	17.7	
10:44	961.9	4.0	65	ssw.	3.6	3,312	672.6	− 7.5	0.67	25	0.81	nnw.	17.6	
						3,250	677.8	− 7.1	.....	26	0.87	nnw.	17.3	
						3,000	699.5	− 5.4	.....	32	1.24	nnw.	16.0	
						2,750	722.0	− 3.7	.....	38	1.70	nnw.	14.8	
						2,500	745.4	− 2.0	.....	43	2.22	nnw.	13.5	
11:03	961.8	5.4	64	ssw.	3.6	2,376	757.8	− 1.2	0.70	46	2.54	nnw.	12.9	
						2,250	769.3	− 0.3	.....	46	2.74	nnw.	12.3	
						2,000	793.9	1.4	.....	47	3.18	nnw.	11.0	
						1,750	819.4	3.2	.....	48	3.69	nnw.	9.7	
						1,500	845.2	5.0	.....	48	4.19	nnw.	8.4	
11:20	961.8	6.2	60	ssw.	4.0	1,351	860.3	6.0	−0.47	49	4.58	nnw.	7.6	
						1,250	871.3	5.5	.....	52	4.70	nw.	7.3	
						1,000	898.0	4.4	.....	58	4.85	wnw.	6.6	
						750	926.2	3.2	.....	65	5.00	w.	6.0	
11:33	961.8	6.5	59	ssw.	2.7	624	940.8	2.6	2.22	68	5.01	wsw.	5.6	
						500	955.0	5.4	.....	62	5.56	sw.	3.6	
11:35	961.8	6.6	59	ssw.	2.7	444	961.8	6.6	.....	59	5.75	ssw.	2.7	Cloudless.

November 4, 1918.

A. M.														
7:33	959.9	3.5	91	sse.	8.5	444	959.9	3.5	.....	91	7.14	sse.	8.5	8/10 St., s.
						500	953.3	4.0	.....	89	7.24	sse.	9.0	Altitude of St. base about 900 m.
						750	924.8	6.2	.....	81	7.68	sse.	11.0	
						1,000	897.1	8.4	.....	73	8.04	s.	13.1	
7:39	959.9	3.5	92	sse.	8.0	1,157	880.0	9.8	−0.88	68	8.24	s.	14.4	
						1,250	870.2	9.8	.....	65	7.88	s.	14.2	
						1,500	844.2	9.9	.....	58	7.08	s.	13.5	
8:00	959.8	4.3	94	sse.	8.0	1,671	827.0	10.0	−0.04	53	6.51	s.	13.1	
						1,750	819.0	9.9	.....	50	6.10	s.	12.7	10/10 St., s.
						2,000	794.5	9.5	.....	39	4.63	s.	11.5	
						2,250	770.8	9.2	.....	31	3.61	s.	10.6	
8:25	959.5	4.8	92	se.	7.6	2,442	752.9	8.8	0.10	19	2.15	s.	9.3	
						2,250	770.8	8.9	.....	29	3.31	s.	10.5	
						2,000	794.5	9.0	.....	43	4.94	s.	12.1	
						1,750	818.8	9.2	.....	56	6.52	s.	13.6	
						1,500	843.5	9.3	.....	70	8.20	s.	15.2	
8:38	959.4	4.8	92	se.	8.5	1,496	844.0	9.3	−0.65	70	8.20	s.	15.2	
						1,250	869.5	7.7	.....	77	8.09	s.	11.9	
						1,000	896.5	6.1	.....	85	8.01	s.	8.6	
8:43	959.3	4.9	92	se.	8.5	787	920.0	4.7	0.15	91	7.77	s.	5.8	
						750	924.0	4.8	.....	91	7.83	s.	6.0	
						500	952.5	5.1	.....	92	8.09	se.	7.3	
8:50	959.2	5.2	92	se.	7.6	444	950.2	5.2	.....	92	8.14	se.	7.6	10/10 St., s.

November 5, 1918.

P. M.														
12:53	949.3	18.2	46	ssw.	11.2	444	949.3	18.2	.....	46	9.61	ssw.	11.2	5/10 St.Cu., ssw.
						500	943.0	17.4	.....	47	9.34	ssw.	10.6	
1:00	949.3	18.8	45	sw.	13.4	753	915.4	14.0	1.36	54	8.63	sw.	7.6	
						1,000	889.0	11.6	.....	57	7.79	sw.	8.6	
						1,250	862.5	9.2	.....	60	6.98	sw.	9.6	
1:16	949.5	18.0	42	sw.	13.4	1,373	849.8	8.0	0.97	61	6.55	sw.	10.1	
						1,500	837.0	7.5	.....	59	6.12	sw.	10.9	
						1,750	811.8	6.4	.....	53	5.00	sw.	12.3	
						2,000	787.4	5.4	.....	47	4.22	sw.	13.8	
1:31	949.6	17.3	45	wsw.	15.2	2,134	774.4	4.8	0.42	44	3.78	sw.	14.6	
						2,250	763.3	3.7	.....	46	3.66	sw.	14.9	
						2,500	739.7	1.2	.....	50	3.33	sw.	15.6	
						2,750	717.0	− 1.3	.....	54	2.96	sw.	16.4	
1:47	949.8	16.5	45	sw.	13.4	2,943	700.0	− 3.2	0.99	57	2.67	sw.	16.9	
						3,000	695.0	− 3.6	.....	57	2.58	sw.	17.0	
						3,250	673.6	− 5.6	.....	60	2.29	sw.	17.6	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 5, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						3,500	652.5	− 7.6		62	1.99	wsw.	18.1	
						3,750	631.9	− 9.6		64	1.72	wsw.	18.7	
2:13	950.0	15.7	47	wsw.	13.0	3,878	621.3	−10.6	0.82	65	1.60	wsw.	19.0	1/10 Cl.St., sw.; 1/10 St.Cu., ssw.
						3,750	631.9	− 9.5		62	1.68	wsw.	18.6	
						3,500	652.5	− 7.3		56	1.84	wsw.	17.9	
						3,250	673.6	− 5.2		50	1.97	wsw.	17.1	
						3,000	695.0	− 3.0		44	2.09	wsw.	16.4	
						2,750	717.0	− 0.8		38	2.17	wsw.	15.7	
3:09	950.3	16.1	43	wsw.	11.6	2,698	722.0	− 0.4	0.58	37	2.19	wsw.	15.5	
						2,500	739.7	0.8		34	2.20	wsw.	15.1	
						2,250	763.2	2.2		30	2.15	wsw.	14.5	
						2,000	787.0	3.6		25	1.98	sw.	14.0	
						1,750	811.0	5.1		21	1.85	sw.	13.5	
3:45	950.5	15.4	40	wsw.	11.6	1,495	837.3	6.6	0.50	17	1.66	sw.	12.9	
						1,250	862.5	7.8		27	2.86	sw.	13.0	
						1,000	889.0	9.0		37	4.25	wsw.	13.0	
4:10	950.9	14.0	44	wsw.	9.4	748	917.0	10.3	1.09	47	5.89	wsw.	13.1	
						500	945.0	13.0		45	6.74	wsw.	10.1	
4:15	951.1	13.6	45	wsw.	9.4	444	951.1	13.6		45	7.01	wsw.	9.4	Few Cl.St., sw.

November 6, 1918.

A. M.														
8:54	963.4	2.1	83	n.	7.6	444	963.4	2.1		83	5.90	n.	7.6	10/10 St., n.
						500	956.5	1.6		85	5.83	n.	8.2	
						750	927.5	−0.6		94	5.46	n.	10.6	
8:58	963.5	2.2	82	n.	7.6	784	923.6	−0.9	0.88	95	5.39	n.	11.1	Altitude of St. base about 850 m.
						1,000	899.1	−2.3		95	4.79	n.	(*)	
						1,250	871.6	−4.0		94	4.11	n.	(*)	
10:22	964.8	2.6	76	n.	8.9	1,288	867.8	−4.3	0.67	94	4.00	n.	(*)	
						1,500	845.0	−2.5		94	4.66	n.	(*)	
10:27	964.8	2.6	76	n.	9.8	1,578	836.6	−1.8	−0.81	94	4.94	n.	(*)	
						1,500	845.0	−2.4		94	4.70	n.	(*)	
10:32	964.9	2.5	76	n.	8.0	1,264	870.9	−4.2	0.67	93	4.00	n.	(*)	
						1,250	872.2	−4.1		93	4.03	n.	(*)	
						1,000	899.9	−2.4		93	4.65	n.	(*)	
						750	928.8	−0.8		92	5.25	n.	(*)	
10:41	965.0	2.9	74	n.	8.5	726	931.8	−0.6	1.21	92	5.35	n.	(*)	
						500	958.1	2.5		77	5.63	n.	(*)	
10:47	965.0	2.8	75	n.	8.0	444	965.0	2.8		75	5.60	n.	8.0	10/10 St.Cu., n.; misting from 10:49 to 10:55 a. m.

November 7, 1918.

P. M.														
3:20	959.8	−1.0	100	n.	4.5	444	959.8	−1.0		100	5.62	n.	4.5	10/10 St., n.
						500	952.8	−1.3		100	5.48	n.	4.9	
						750	923.0	−2.8		99	4.79	nne.	6.6	
3:47	959.3	−1.2	100	n.	4.5	816	915.4	−3.2	0.59	99	4.63	nne.	7.1	
						1,000	894.0	−2.0		99	5.12	nne.	5.4	
4:11	959.0	−1.5	100	n.	5.8	1,127	880.1	−1.1	−0.60	99	5.51	nne.	4.2	
						1,000	894.0	−1.8		99	5.21	nne.	5.8	
4:24	958.8	−1.5	100	n.	6.7	827	913.7	−2.7	0.31	99	4.83	n.	7.9	
						750	922.2	−2.5		99	4.91	n.	7.7	Heavy snow falling during entire flight.
						500	951.8	−1.7		100	5.30	nnw.	6.9	
4:34	958.4	−1.5	100	nnw.	6.7	444	958.4	−1.5		100	5.39	nnw.	6.7	10/10 St., nnw.

November 8, 1918.

A. M.														
8:27	954.0	−3.5	92	wsw.	5.4	444	954.0	− 3.5		92	4.20	wsw.	5.4	10/10 A.St., w.
						500	947.0	− 3.6		91	4.11	wsw.	6.6	
						750	917.5	− 3.9		86	3.79	wnw.	11.8	
8:35	954.0	−3.5	92	wsw.	5.4	810	910.7	− 4.0	0.14	85	3.71	wnw.	13.0	
						1,000	888.8	− 4.8		86	3.51	wnw.	13.6	
						1,250	861.0	− 5.9		87	3.23	w.	14.3	
						1,500	834.0	− 7.0		87	2.94	w.	15.0	
8:49	954.0	−3.7	92	wsw.	5.4	1,535	830.3	− 7.1	0.43	88	2.94	w.	15.1	
						1,750	807.0	− 8.1		89	2.73	w.	15.9	Altitude of A.Cu. base about 2,150 m.
						2,000	781.6	− 9.2		90	2.51	w.	16.8	
						2,250	757.1	−10.3		91	2.30	w.	17.7	
9:10	954.0	−3.6	91	wsw.	6.3	2,292	753.0	−10.5	0.45	91	2.26	w.	17.9	
						2,500	733.0	−11.4		87	1.99	w.	16.9	
						2,750	709.6	−12.4		82	1.71	w.	15.8	
						3,000	686.2	−13.5		77	1.46	w.	14.6	
						3,250	664.1	−14.5		73	1.26	w.	13.4	
9:46	953.8	−3.0	92	wsw.	6.3	3,381	652.4	−15.1	−2.64	70	1.14	w.	12.8	9/10 A.St., w.; 1/10 A.Cu., w.
10:22	953.6	−1.7	88	wsw.	7.2	3,360	653.8	−16.3	0.54	81	1.18	w.	14.0	
						3,250	663.8	−15.7		82	1.27	w.	14.4	
						3,000	686.0	−14.4		83	1.44	w.	15.3	
						2,750	708.5	−13.0		85	1.68	w.	16.2	Snow began 11:10 a. m. and continued.
11:22	953.2	−0.6	92	wsw.	11.2	2,559	726.2	−12.0	−0.32	86	1.87	w.	16.9	
						2,500	731.8	−12.2		87	1.85	w.	16.2	
11:28	953.2	−0.6	93	wsw.	10.7	2,404	741.1	−12.5	0.45	88	1.82	w.	15.0	
						2,250	756.3	−11.8		89	1.97	w.	14.9	
						2,000	781.6	−10.7		90	2.20	w.	14.8	
						1,750	807.0	− 9.6		91	2.45	w.	14.6	

*Instrument did not record; anemometer frozen.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 8, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:48	953.1	−0.7	94	wsw.	9.8	1,557	827.3	− 8.7	0.61	92	2.68	w.	14.5	
						1,500	833.5	− 8.4		92	2.75	w.	14.6	Altitude of St. base about 1,450 m.
						1,250	860.3	− 6.8		93	3.20	w.	15.1	
						1,000	888.0	− 5.3		94	3.68	w.	15.6	
12:00 noon	953.0	−0.8	91	wsw.	8.9	804	910.7	− 4.1	0.92	95	4.11	w.	16.0	
						750	916.7	− 3.6		94	4.25	w.	14.9	
						500	946.1	− 1.3		92	5.04	wsw.	10.0	
P. M.														
12:05	953.0	−0.8	91	wsw.	8.9	444	953.0	− 0.8		91	5.20	wsw.	8.9	10/10 St. w.

November 9, 1918 (No. 1).

A. M.														
8:05	965.6	−5.3	84	wnw.	8.9	444	965.6	− 5.3		84	3.28	wnw.	8.9	Cloudless.
						500	958.7	− 4.9		84	3.40	wnw.	9.5	
						750	928.9	− 3.3		85	3.94	nnw.	12.4	
8:09	965.6	−5.3	84	wnw.	8.9	802	922.8	− 3.0	−0.64	85	4.04	nnw.	13.0	
						1,000	900.0	− 2.0		69	3.57	nnw.	13.5	
8:25	965.8	−5.3	84	wnw.	10.3	1,184	879.4	− 1.0	−0.52	55	3.09	nnw.	14.0	
						1,250	872.0	− 1.3		53	2.90	nnw.	15.3	
						1,500	845.4	− 2.5		44	2.18	nnw.	20.3	
8:50	966.1	−5.3	84	wnw.	8.0	1,593	835.7	− 3.0	0.49	41	1.95	nnw.	22.2	
						1,750	819.6	− 2.5		38	1.88	nnw.	18.2	
						2,000	794.0	− 1.8		33	1.74	nnw.	11.9	
8:53	966.1	−5.3	84	wnw.	8.5	2,057	788.2	− 1.6	−0.30	32	1.71	nnw.	10.5	
						2,250	769.2	− 2.4		30	1.50	nnw.	11.5	
						2,500	745.1	− 3.3		27	1.25	nnw.	12.8	
						2,750	722.0	− 4.3		24	1.02	nnw.	14.1	
						3,000	699.5	− 5.3		21	0.82	nnw.	15.4	
						3,250	677.8	− 6.3		18	0.65	nnw.	16.7	
9:41	966.7	−5.3	84	wnw.	8.5	3,355	668.9	− 6.7	0.39	17	0.59	nnw.	17.3	
						3,500	656.5	− 7.3		18	0.57	nnw.	17.2	
						3,750	636.0	− 9.8		19	0.50	nnw.	17.1	
						4,000	615.9	−11.7		20	0.45	nw.	16.9	
						4,250	596.2	−13.7		21	0.39	nw.	16.8	
11:12	967.3	−3.9	83	wnw.	7.6	4,368	587.0	−14.6	0.74	22	0.38	nw.	16.7	
						4,250	596.2	−13.8		22	0.40	nw.	16.5	
						4,000	616.2	−12.0		22	0.48	nw.	16.0	
						3,750	636.9	−10.2		23	0.59	nw.	15.5	
11:42	967.5	−3.8	84	wnw.	7.6	3,573	651.7	− 9.0	0.78	23	0.65	nw.	15.1	
						3,500	658.0	− 8.4		23	0.69	nw.	15.3	
						3,250	679.5	− 6.5		21	0.74	nw.	16.0	
P. M.														
12:02	967.6	−3.6	82	wnw.	7.6	3,010	700.5	− 4.6	0.33	20	0.83	nw.	16.6	
						3,000	701.7	− 4.6		20	0.83	nw.	16.6	
						2,750	724.7	− 3.7		19	0.85	nw.	15.7	
						2,500	747.8	− 2.9		18	0.86	wnw.	14.9	
						2,250	771.8	− 2.1		17	0.87	wnw.	14.1	
12:18	967.7	−3.0	78	wnw.	6.3	2,138	782.2	− 1.7	0.18	16	0.85	wnw.	13.7	
						2,000	796.0	− 1.5		16	0.86	wnw.	12.8	
						1,750	821.5	− 1.0		16	0.90	wnw.	11.1	
12:30	967.8	−3.0	78	wnw.	6.7	1,568	840.3	− 0.7	0.20	16	0.92	wnw.	9.8	
						1,500	847.8	− 0.6		16	0.93	wnw.	10.1	
						1,250	875.0	− 0.1		18	1.09	nw.	11.0	
12:50	967.8	−3.0	78	nnw.	4.0	1,020	900.1	0.4	−1.23	19	1.20	nw.	11.9	
						1,000	902.8	0.2		20	1.24	nw.	11.9	
						750	931.4	− 2.9		27	1.30	nw.	11.6	
12:55	967.9	−3.0	78	nw.	4.5	669	940.9	− 3.9	0.40	29	1.28	nw.	11.5	
						500	961.3	− 3.2		66	3.09	nw.	6.2	
12:57	967.9	−3.0	78	nw.	4.5	444	967.9	− 3.0		78	3.70	nw.	4.5	Cloudless.

November 9, 1918 (No. 2).

P. M.														
1:35	968.3	−2.9	78	nw.	3.6	444	968.3	−2.9		78	3.74	nw.	3.6	Cloudless.
						500	961.3	−3.1		78	3.67	nw.	4.8	
						750	931.8	−4.1		76	3.29	nw.	10.4	
1:45	968.4	−2.8	78	nw.	3.6	783	927.7	−4.2	0.38	76	3.27	nw.	11.1	
						1,000	903.0	−1.9		54	2.82	nw.	12.6	
1:54	968.5	−2.8	80	nw.	3.1	1,150	886.0	−0.3	−1.06	39	2.32	nw.	13.6	
						1,250	875.1	−0.6		37	2.15	nw.	13.3	
						1,500	848.3	−1.3		32	1.75	nw.	12.6	
						1,750	822.6	−2.1		27	1.39	nw.	12.0	
						2,000	797.0	−2.9		22	1.06	nw.	11.3	
						2,250	771.9	−3.6		17	0.77	nw.	10.6	
2:34	968.9	−3.0	78	nw.	2.7	2,275	769.3	−3.7	0.30	17	0.76	nw.	10.5	
						2,500	747.6	−4.8		17	0.69	nw.	11.6	
						2,750	724.5	−6.1		16	0.58	nw.	12.9	
						3,000	702.0	−7.4		16	0.52	nw.	14.2	Cloudless.
						3,250	680.0	−8.6		15	0.44	nw.	15.4	
3:53	969.8	−3.4	78	nw.	2.7	3,283	676.9	−8.8	0.55	15	0.43	nw.	15.6	
						3,250	680.0	−8.6		15	0.44	nw.	15.4	
						3,000	702.0	−7.1		15	0.50	nw.	14.1	
						2,750	725.1	−5.7		14	0.53	nw.	12.8	
						2,500	748.9	−4.2		14	0.60	nw.	11.5	
4:10	970.0	−4.4	79	nw.	3.1	2,381	760.3	−3.5	0.45	14	0.64	nw.	10.9	
						2,250	773.3	−2.9		14	0.67	nw.	11.0	
						2,000	798.5	−1.8		13	0.68	nw.	11.3	
						1,750	824.1	−0.7		13	0.75	nw.	11.5	
						1,500	849.9	0.5		12	0.76	nw.	11.7	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 9, 1918 (No. 2)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
4:33	970.1	−4.5	82	wsw.	1.3	1,451	854.7	0.7	−0.40	12	0.77	nw.	11.8	
						1,250	876.5	−0.1		13	0.79	nw.	11.0	
						1,000	904.0	−1.1		14	0.78	nw.	10.0	
4:42	970.2	−5.7	81	wsw.	0.9	881	918.0	−1.6	−1.01	14	0.75	nw.	9.5	
						750	933.3	−2.9		34	1.63	wnw.	6.9	
						500	963.9	−5.4		72	2.79	wsw.	2.0	
4:48	970.2	−6.0	80	wsw.	0.9	444	970.2	−6.0		80	2.94	wsw.	0.9	Few A.St.

November 10, 1918.

A. M.														
9:28	969.8	−9.0	94	sw.	3.1	444	969.8	−9.0		94	2.67	sw.	3.1	4/10 A.St., w.
						500	962.9	−6.9		88	3.00	sw.	5.9	
						750	933.4	2.4		64	4.65	ssw.	18.5	
9:34	969.7	−8.6	94	sw.	2.7	816	925.5	4.8	−3.71	57	4.90	ssw.	21.8	
						1,000	904.4	4.6		49	4.16	ssw.	18.1	
						1,250	877.0	4.4		37	3.10	sw.	13.2	
10:11	969.5	−6.9	95	ssw.	2.7	1,422	858.8	4.3	0.08	29	2.41	sw.	9.7	
						1,500	851.0	3.7		30	2.39	sw.	9.2	
						1,750	825.0	1.8		32	2.23	sw.	7.8	
						2,000	800.0	−0.2		34	2.04	wsw.	6.3	
11:17	969.1	−5.5	95	ssw.	3.1	2,234	776.2	−2.0	0.76	36	1.86	wsw.	4.9	
						2,000	800.0	−0.3		38	2.26	sw.	7.4	Few A.St., w.
						1,750	824.8	1.6		39	2.68	sw.	10.1	
						1,500	850.9	3.4		41	3.20	ssw.	12.8	
11:35	969.0	−5.0	95	ssw.	4.0	1,349	866.6	4.5	0.26	42	3.54	ssw.	14.4	
						1,250	877.0	4.8		33	3.70	ssw.	14.6	
						1,000	904.4	5.4		45	4.04	ssw.	15.2	
11:46	969.0	−4.2	96	ssw.	4.5	856	920.6	5.8	−2.38	46	4.24	ssw.	15.6	
						750	932.8	3.3		59	4.57	ssw.	13.0	
						500	962.0	−2.7		89	4.34	ssw.	6.8	
11:54	968.9	−4.0	96	ssw.	5.4	444	968.9	−4.0		96	4.20	ssw.	5.4	Few A.St., w.

November 11, 1918.

P. M.														
2:42	959.8	5.5	68	nw.	4.0	444	959.8	5.5		68	6.14	nw.	4.0	1/10 Ci.St., wnw.; 1/10 St.Cu., wnw.
						500	953.5	6.0		64	5.98	nw.	6.2	
						750	924.7	8.2		45	4.89	nnw.	16.2	
2:48	959.9	5.6	68	nw.	3.6	806	918.5	8.7	−0.88	41	4.61	nnw.	18.4	
						1,000	896.9	7.8		42	4.44	nnw.	18.2	1/10 Ci.St., wnw.; 4/10 St.Cu., wnw.
						1,250	870.3	6.6		42	4.10	nw.	17.9	
3:00	960.1	6.1	63	nw.	8.9	1,500	844.3	5.4	0.48	43	3.86	nw.	17.6	
						1,750	818.8	3.6		51	4.03	nw.	17.6	
						2,000	794.0	1.5		59	4.02	wnw.	16.9	
						2,250	770.0	− 0.1		67	4.06	wnw.	16.5	
3:21	960.7	6.2	63	nw.	8.9	2,315	763.8	− 0.6	0.74	69	4.01	wnw.	16.4	
						2,500	746.5	− 2.0		76	3.93	w.	16.1	
3:34	961.1	5.9	63	nw.	9.8	2,635	734.0	− 3.0	0.75	81	3.85	w.	15.9	
						2,750	723.8	− 3.9		82	3.62	w.	16.2	10/10 A.St., w.
						3,000	701.1	− 5.7		83	3.14	w.	16.9	
						3,250	679.1	− 7.6		84	2.70	w.	17.6	
						3,500	657.4	− 9.5		86	2.33	w.	18.3	
3:55	961.7	5.3	67	nnw.	8.9	3,743	636.6	−11.3	0.80	87	2.01	w.	19.0	
						3,500	657.4	− 9.3		83	2.29	w.	19.0	
						3,250	678.3	− 7.2		79	2.62	w.	19.0	
						3,000	700.1	− 5.1		74	2.95	w.	19.0	
4:06	961.9	5.2	68	nnw.	7.2	2,862	712.0	− 3.9	0.51	72	3.18	w.	19.0	
						2,750	722.7	− 3.3		71	3.29	w.	19.0	
						2,500	745.9	− 2.1		69	3.53	wnw.	19.1	
4:19	962.2	4.9	69	nnw.	6.7	2,310	763.8	− 1.1	0.38	68	3.79	wnw.	19.1	
						2,250	770.0	− 0.9		67	3.80	wnw.	(*)	
						2,000	794.0	0.1		64	3.94	wnw.	(*)	
						1,750	818.8	1.0		62	4.07	wnw.	(*)	
						1,500	844.4	1.9		59	4.14	wnw.	(*)	
						1,250	871.0	2.9		56	4.22	wnw.	(*)	
						1,000	898.3	3.8		53	4.25	wnw.	(*)	
4:25	962.3	5.0	69	nnw.	7.6	823	918.5	4.5	0.18	51	4.29	wnw.	(*)	
						750	926.8	4.6		54	4.58	wnw.	(*)	
						500	956.7	5.1		65	5.71	nw.	(*)	
4:59	963.1	5.2	68	nw.	7.6	444	963.1	5.2		68	6.02	nw.	7.6	9/10 A.St., w.

November 12, 1918, series (No. 1).

A. M.														
7:35	970.3	0.1	71	w.	8.0	444	970.3	0.1		71	4.37	w.	8.0	Cloudless.
						500	963.8	2.0		65	4.27	w.	10.3	
						750	934.8	5.1		38	3.34	nw.	20.7	
7:37	970.3	0.2	71	w.	8.9	768	932.1	5.4	−1.64	36	3.23	nw.	21.4	
						1,000	906.0	3.6		34	2.69	nw.	20.2	
						1,250	878.5	1.6		32	2.20	nw.	19.0	
7:47	970.4	0.2	71	w.	9.4	1,474	854.2	− 0.2	0.79	30	1.80	nw.	17.8	
						1,500	851.8	− 0.4		30	1.77	nw.	17.9	
						1,750	825.3	− 2.8		31	1.50	nw.	19.0	
7:56	970.6	0.1	69	w.	9.4	1,916	808.0	− 4.4	0.95	32	1.35	nw.	19.7	
						2,000	799.3	− 5.0		32	1.28	nw.	19.6	
						2,250	774.0	− 6.8		32	1.10	nw.	19.3	
						2,500	749.7	− 8.6		33	0.97	wnw.	18.9	
						2,750	726.0	−10.4		33	0.83	wnw.	18.6	

* Instrument did not record; kites beaten down.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 12, 1918, series (No. 1)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	At 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:24	970.6	0.1	67	w.	8.0	2,816	719.8	−10.9	0.65	33	0.79	wnw.	18.5	
						2,750	726.0	−10.5		33	0.82	wnw.	18.2	
						2,500	749.7	− 9.1		35	0.98	wnw.	17.2	
						2,250	774.0	− 7.6		37	1.19	nw.	16.2	
9:05	970.6	0.6	65	w.	8.0	2,093	789.8	− 6.7	0.97	38	1.32	nw.	15.6	
						2,000	799.3	− 5.8		37	1.39	nw.	15.4	
						1,750	825.3	− 3.4		35	1.61	nw.	15.0	
						1,500	851.8	− 1.0		33	1.85	nw.	14.6	
9:23	970.6	1.0	62	w.	8.5	1,330	869.8	0.7	0.70	32	2.06	nw.	14.3	
						1,250	878.5	1.3		31	2.08	nw.	14.9	
						1,000	906.0	3.0		28	2.12	nw.	16.9	
9:55	970.6	1.9	64	w.	6.3	786	930.5	4.5	−0.67	25	2.10	nw.	18.5	
						750	934.8	4.3		29	2.41	nw.	17.2	
						500	953.8	2.6		58	4.27	w.	8.3	
10:02	970.6	2.2	64	w.	6.3	444	970.6	2.2		64	5.30	w.	6.3	Cloudless.

November 12, 1918, series (No. 2).

A. M.														
10:27	970.6	2.9	65	w.	6.7	444	970.6	2.9		65	4.89	w.	6.7	Cloudless.
						500	963.3	3.0		60	4.55	w.	(*)	
						750	934.5	3.6		38	3.01	nw	(*)	
10:35	970.6	3.0	66	wnw.	6.3	813	927.4	3.7	−0.22	32	2.55	nw.	(*)	
						1,000	906.1	2.8		32	2.39	nw.	(*)	
						1,250	878.8	1.6		31	2.13	wnw.	(*)	
						1,500	851.5	0.5		31	1.96	wnw.	(*)	
10:50	970.6	3.3	66	wnw.	6.3	1,533	848.2	0.3	0.47	31	1.93	wnw.	(*)	
						1,750	825.1	−3.0		31	1.47	wnw.	(*)	
11:00	970.6	3.4	64	wnw.	6.3	1,910	809.8	−5.3	1.53	31	1.21	wnw.	(*)	
						2,000	799.3	−5.5		30	1.15	wnw.	(*)	
						2,250	774.0	−6.2		27	0.98	wnw.	(*)	
						2,500	749.6	−6.8		25	0.86	wnw.	(*)	
						2,750	726.0	−7.5		22	0.71	nw.	(*)	
						3,000	702.8	−8.1		20	0.61	nw.	(*)	
12:00	970.3	3.8	62	nw.	6.3	3,180	686.8	−8.6	0.26	18	0.53	nw.	(*)	
NOON.														
						3,000	702.8	−8.1		18	0.55	nw.	(*)	
						2,750	726.0	−7.5		18	0.58	nw.	(*)	
						2,500	749.4	−6.8		18	0.62	nw.	(*)	
						2,230	775.4	−6.2		18	0.65	nw.	(*)	
P. M.														
12:23	970.3	3.8	62	nw.	6.3	2,040	794.6	−5.6	0.95	18	0.69	nw.	18.5	
						2,000	798.4	−5.2		19	0.75	nw.	18.6	
						1,750	824.2	−2.9		22	1.06	nw.	19.4	
12:43	970.3	3.9	62	nw.	5.4	1,523	848.2	−0.7	0.21	25	1.44	nw.	20.1	
						1,500	850.5	−0.7		25	1.44	nw.	19.9	
						1,250	877.9	−0.1		29	1.76	nw.	17.3	
						1,000	905.5	0.4		32	2.01	nw.	14.7	
1:11	970.3	4.2	60	nw.	3.6	852	922.5	0.7	0.88	34	2.19	nw.	13.1	
						750	933.9	1.6		40	2.74	nw.	10.7	
						500	963.3	3.8		55	4.41	nw.	4.9	
1:16	970.3	4.3	58	nw.	3.6	444	970.3	4.3		58	4.82	nw.	3.6	Cloudless.

November 12, 1918, series (No. 3).

P. M.														
2:14	970.2	4.6	58	wnw.	3.1	444	970.2	4.6		58	4.92	wnw.	3.1	Cloudless.
						500	963.4	4.1		58	4.75	wnw.	7.0	
						750	934.0	1.8		57	3.97	nw.	9.7	
2:20	970.2	4.7	58	nw.	4.5	868	920.7	0.7	0.92	57	3.67	nw.	12.3	
						1,000	905.1	0.2		53	3.29	nw.	13.7	
						1,250	877.2	−0.6		47	2.73	nw.	16.3	
						1,500	850.4	−1.5		40	2.16	nw.	19.0	
2:38	970.0	4.7	58	nw.	3.1	1,640	835.7	−2.0	0.35	36	1.86	nw.	20.5	
						1,750	824.0	−2.2		35	1.78	nw.	20.5	
						2,000	798.8	−2.8		32	1.55	nw.	20.6	
						2,250	774.3	−3.4		29	1.33	nw.	20.7	
						2,500	750.6	−4.0		27	1.18	nw.	20.7	
3:01	969.9	5.0	58	nw.	4.0	2,654	736.2	−4.4	0.24	25	1.06	nw.	20.8	
						2,750	727.1	−4.7		26	1.07	nw.	20.8	
						3,000	704.0	−5.9		29	1.08	nw.	20.9	
						3,250	681.8	−7.0		31	1.05	nw.	20.9	
						3,500	660.0	−8.1		34	1.04	nw.	21.0	Few Cl.St., wnw.
3:35	969.5	5.1	56	nw.	3.1	3,621	649.7	−8.6	0.46	35	1.03	nw.	21.0	
						3,500	660.0	−8.0		35	1.08	nw.	20.6	
						3,250	681.8	−6.8		34	1.17	nw.	19.8	
						3,000	704.0	−5.5		33	1.27	nw.	18.9	
						2,750	726.2	−4.3		33	1.41	nw.	18.1	
4:30	968.9	4.2	57	nw.	4.5	2,578	742.2	−3.4	0.17	32	1.47	nw.	17.5	
						2,500	749.6	−3.3		31	1.44	nw.	17.6	
						2,250	773.4	−2.8		29	1.40	nw.	17.9	
						2,000	797.8	−2.4		27	1.35	nw.	18.2	
						1,750	823.1	−2.0		25	1.29	nw.	18.5	
4:57	968.6	3.0	63	wnw.	3.6	1,707	828.0	−1.9	0.61	25	1.30	nw.	18.5	
						1,500	849.5	−0.6		26	1.51	nw.	16.7	
						1,250	876.2	0.9		27	1.76	nw.	14.5	
						1,000	903.9	2.4		28	2.03	nw.	12.3	
5:20	968.5	3.3	61	nw.	3.1	826	923.9	3.5	−0.13	29	2.28	nw.	10.8	
						750	932.7	3.4		35	2.73	nw.	9.3	
						500	961.5	3.1		57	4.35	wnw.	4.2	
5:24	968.4	3.0	62	wnw.	3.1	444	968.4	3.0		62	4.70	wnw.	3.1	Few Cl.St., wnw.; few A.St., wnw.

*Record uncertain, due to cylinder slipping.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 12, 1918, series (No. 4).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
5:50	968.3	2.1	63	nw.	3.1	444	968.3	2.1		63	4.48	nw.	3.1	Few Cl.St., wnw.: few A.St., wnw.
						500	961.6	2.3		62	4.47	nw.	5.6	
5:53	968.2	2.0	64	nw.	3.1	742	933.2	2.9	−0.27	58	4.37	nw.	14.4	
						750	932.4	2.9		58	4.37	nw.	14.4	
						1,000	903.9	1.9		42	2.94	nw.	15.2	
6:05	968.3	0.6	68	nw.	4.0	1,236	877.4	1.0	0.38	28	1.84	nw.	15.9	
						1,250	875.8	0.9		28	1.83	nw.	15.9	
						1,500	848.4	− 0.3		27	1.61	nw.	16.0	
						1,750	822.5	− 1.6		26	1.39	nw.	16.1	
						2,000	797.3	− 2.8		24	1.16	wnw.	16.1	
						2,250	773.0	− 4.0		23	1.01	wnw.	16.2	
6:38	968.6	1.8	65	w.	5.8	2,480	751.0	− 5.2	0.50	22	0.87	wnw.	16.3	
						2,500	749.0	− 5.2		22	0.87	wnw.	16.3	
						2,750	725.5	− 5.1		26	1.03	wnw.	16.7	
						3,000	702.3	− 5.0		30	1.20	wnw.	17.1	
7:04	968.9	−1.0	70	w.	4.0	3,059	696.9	− 5.0	−0.03	31	1.24	wnw.	17.2	
						3,250	680.0	− 6.4		40	1.42	wnw.	18.1	Cloudless.
						3,500	658.8	− 8.1		52	1.60	wnw.	19.2	
7:45	968.9	−1.0	76	w.	4.0	3,723	640.4	− 9.7	0.68	63	1.68	wnw.	20.2	
						3,500	658.8	− 8.2		62	1.88	wnw.	19.4	
						3,250	680.0	− 6.6		61	2.14	wnw.	18.4	
						3,000	702.3	− 4.9		60	2.43	wnw.	17.4	
8:24	969.0	−1.4	85	w.	4.5	2,892	712.7	− 4.2	−0.22	59	2.54	wnw.	17.0	
						2,750	725.5	− 4.5		53	2.22	wnw.	15.6	
						2,500	749.0	− 5.0		44	1.76	wnw.	13.1	
8:39	969.1	−2.2	88	w.	4.5	2,439	755.5	− 5.2	0.42	41	1.62	wnw.	12.4	
						2,250	773.0	− 4.0		35	1.53	wnw.	11.5	
8:46	969.1	−2.8	91	w.	4.5	2,048	792.9	− 3.6	0.51	33	1.49	wnw.	11.2	
						2,000	797.3	− 3.4		33	1.52	wnw.	11.2	
						1,750	823.0	− 2.1		31	1.59	wnw.	11.0	
						1,500	849.3	− 0.8		30	1.71	wnw.	10.8	
						1,250	876.4	0.5		28	1.77	wnw.	10.6	
9:10	969.2	−2.8	91	w.	4.5	1,228	879.0	0.6	0.27	28	1.79	wnw.	10.6	
						1,000	903.9	1.2		34	2.26	wnw.	9.7	
9:18	969.2	−3.0	91	nw.	5.4	747	933.2	1.9	1.88	40	2.80	wnw.	8.7	
						500	962.4	− 2.7		84	4.10	nw.	6.0	
9:22	969.2	−3.8	94	nw.	5.4	444	969.2	− 3.8		94	4.17	nw.	5.4	1/10 Ci.St., w.

November 12-13, 1918, series (No. 5).

P. M.														
9:55	969.2	−3.7	84	nw.	4.9	444	969.2	− 3.7		84	3.76	nw.	4.9	1/10 Ci.St., w.
						500	962.5	− 2.8		78	3.78	nw.	5.8	
						750	933.0	1.2		51	3.40	nw.	9.6	
9:58	969.2	−2.9	80	nw.	4.0	813	925.6	2.2	−1.60	44	3.15	nw.	10.6	
						1,000	904.0	2.1		27	1.92	nw.	9.4	
10:17	969.1	−2.2	76	nw.	4.9	1,025	901.4	2.1	0.05	25	1.78	nw.	9.2	
						1,250	876.5	1.4		25	1.69	nw.	10.3	
						1,500	849.3	0.6		24	1.53	nw.	11.6	
						1,750	823.3	− 0.2		23	1.38	nw.	12.8	
10:43	969.0	−3.0	83	nw.	4.9	1,944	803.6	− 0.8	0.32	23	1.31	nw.	13.8	
						2,000	798.0	− 1.0		24	1.35	nw.	14.0	
						2,250	772.8	− 1.6		27	1.44	nw.	14.8	
						2,500	749.0	− 2.3		30	1.51	nw.	15.8	
11:15	968.8	−4.2	82	nw.	4.9	2,749	726.0	− 3.0	0.27	33	1.57	nw.	16.6	
						3,000	703.0	− 4.3		44	1.87	nw.	16.8	
						3,250	681.0	− 5.5		55	2.11	nw.	17.0	Cloudless.
11:51	968.6	−4.1	86	nw.	3.1	3,485	661.0	− 6.7	0.50	65	2.26	nw.	17.2	
						3,500	660.0	− 6.8		65	2.24	nw.	17.2	
						3,750	639.0	− 8.2		64	1.95	nw.	17.9	
						4,000	618.8	− 9.6		64	1.72	nw.	18.6	
						4,250	599.0	−11.0		63	1.49	nw.	19.3	
A. M.														
12:12	968.5	−4.1	88	nw.	1.8	4,266	597.7	−11.1	0.60	63	1.48	nw.	19.4	
						4,250	599.0	−11.0		63	1.49	nw.	19.4	
						4,000	618.8	− 9.4		63	1.73	nw.	18.8	
						3,750	639.0	− 7.9		63	1.97	nw.	18.2	
						3,500	660.0	− 6.3		63	2.26	nw.	17.6	
12:38	968.3	−5.1	87	nw.	1.8	3,455	663.8	− 6.0	0.43	63	2.32	nw.	17.5	
						3,250	681.0	− 5.1		62	2.47	nw.	17.2	
						3,000	703.0	− 4.1		62	2.68	nw.	16.8	
						2,750	725.7	− 3.0		61	2.90	nw.	16.4	
						2,500	749.0	− 1.9		60	3.13	nw.	16.0	
1:02	968.2	−5.8	89	nw.	1.8	2,494	749.6	− 1.9	0.51	60	3.13	nw.	16.0	
						2,250	772.8	− 0.7		51	2.94	nw.	14.0	
						2,000	797.5	0.6		42	2.68	nw.	12.0	
1:15	968.1	−6.0	87	nw.	1.8	1,862	811.2	1.3	−0.43	37	2.18	nw.	10.9	Faint aurora from 1:15 to 4:13 a. m.
						1,750	822.4	0.8		35	2.26	nw.	10.5	
1:21	968.1	−6.8	89	nw.	1.8	1,606	837.3	0.2	0.44	33	2.05	nw.	10.1	
						1,500	848.3	0.7		33	2.12	nw.	9.4	
						1,250	875.2	1.8		32	2.23	nw.	7.6	
						1,000	902.8	2.9		31	2.33	nw.	5.9	
1:36	968.0	−5.9	80	nw.	2.7	927	911.0	3.2	−1.74	31	2.38	nw.	5.4	
						750	931.1	0.1		49	3.01	nw.	4.1	
						500	961.0	− 4.2		74	3.18	nw.	2.2	
1:42	968.0	−5.2	80	nw.	1.8	444	968.0	− 5.2		80	3.15	nw.	1.8	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 13, 1918, series (No. 6).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m.p.s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m.p.s.*	
1:19	960.2	3.6	61	sse.	3.6	444	960.2	3.6	.....	61	4.83	sse.	3.6	3/10 Ci.St., wnw.
						500	953.7	3.8	.....	58	4.65	sse.	5.1	
						750	924.8	4.6	.....	46	3.90	s.	11.9	
1:26	960.0	3.7	60	sse.	3.6	812	917.4	4.8	−0.33	43	3.70	s.	13.6	
						1,000	896.4	5.6	.....	39	3.55	ssw.	12.5	
						1,250	869.1	6.6	.....	34	3.32	ssw.	11.1	
						1,500	843.0	7.6	.....	29	3.03	sw.	9.6	
2:00	959.4	3.8	60	sse.	2.2	1,706	822.3	8.5	−0.41	25	2.78	wsw.	8.4	
						1,750	817.4	8.3	.....	25	2.74	wsw.	8.6	
						2,000	792.8	7.0	.....	26	2.61	wsw.	9.6	
						2,250	769.0	5.7	.....	27	2.47	w.	10.6	
2:25	959.1	4.0	57	sse.	4.5	2,333	761.4	5.3	0.51	27	2.41	w.	11.0	
						2,500	746.0	4.3	.....	26	2.16	w.	11.1	
						2,750	723.2	2.8	.....	25	1.87	w.	11.2	Few Ci.St., wnw.
						3,000	701.4	1.3	.....	24	1.61	wnw.	11.3	
3:23	958.5	4.6	67	sse.	3.6	3,244	680.1	−0.1	0.66	23	1.39	wnw.	11.4	
						3,000	701.4	1.7	.....	23	1.59	wnw.	11.3	
						2,750	723.2	3.6	.....	23	1.82	wnw.	11.1	
						2,500	746.0	5.4	.....	24	2.15	w.	11.0	
3:40	958.3	4.9	63	sse.	3.1	2,382	756.9	6.3	0.27	24	2.29	w.	10.9	
						2,250	769.0	6.7	.....	24	2.34	w.	10.8	
						2,000	792.8	7.3	.....	25	2.56	w.	10.7	
						1,750	817.4	8.0	.....	26	2.79	wsw.	10.6	
4:00	958.1	4.8	63	sse.	3.6	1,562	836.2	8.5	−0.20	26	2.89	wsw.	10.5	
						1,500	842.5	8.4	.....	27	2.98	wsw.	10.6	
						1,250	868.3	7.9	.....	30	3.20	sw.	11.1	
						1,000	895.0	7.4	.....	32	3.30	ssw.	11.6	
4:19	957.9	4.1	71	sse.	3.6	870	909.2	7.1	−0.59	34	3.43	s.	11.9	
						750	922.8	6.4	.....	44	4.23	sse.	9.8	
						500	951.2	4.9	.....	64	5.54	ese.	5.5	
4:29	957.8	4.6	69	ese.	4.5	444	957.8	4.6	.....	69	5.85	ese.	4.5	2/10 Ci.St., wnw.

November 16, 1918.

P. M.														
1:03	945.5	3.3	100	n.	8.9	444	945.5	3.3	.....	100	7.74	n.	8.9	Dense fog became light at 12:30 p. m. and continued; raining during flight.
						500	939.1	3.8	.....	100	8.02	n.	8.9	
						750	910.8	6.1	.....	100	9.42	ne.	8.7	
1:30	945.7	3.3	100	nnw.	7.6	781	907.4	6.4	−0.92	100	9.61	ne.	8.7	
						1,000	883.8	5.7	.....	99	9.07	ne.	8.0	
						1,250	857.3	4.8	.....	99	8.51	ne.	7.1	
1:36	945.7	3.3	100	nnw.	8.9	1,483	832.7	4.0	0.32	98	7.97	ne.	6.4	
						1,250	857.3	4.7	.....	98	8.37	ne.	6.4	
						1,000	883.8	5.5	.....	97	8.76	nne.	6.4	
1:47	945.8	3.4	100	nnw.	8.5	708	909.0	6.2	−0.86	97	9.20	nne.	6.4	
						750	910.9	6.0	.....	97	9.07	nne.	6.5	
						500	939.2	3.9	.....	99	8.00	nnw.	8.1	
1:54	945.9	3.4	100	nnw.	8.5	444	945.9	3.4	.....	100	7.80	nnw.	8.5	10/10 St.

November 18, 1918 (No. 1).

A. M.														
8:22	963.2	−2.2	81	nnw.	8.9	444	963.2	−2.2	.....	81	4.12	nnw.	8.9	10/10 St.Cu., nnw.; light snow.
						500	956.4	−2.7	.....	82	4.00	nnw.	10.9	
						750	926.6	−4.8	.....	89	3.63	nnw.	20.0	
8:25	963.3	−2.2	82	nnw.	8.9	861	913.7	−5.8	0.86	92	3.45	nnw.	24.0	Altitude of St.Cu. base about 900 m.
						1,000	897.4	−3.9	.....	93	4.10	nnw.	24.1	
8:28	963.3	−2.2	83	nnw.	10.3	1,142	881.7	−2.0	−1.35	95	4.91	nnw.	24.2	
						1,250	869.3	−2.6	.....	96	4.72	nnw.	24.3	
						1,500	842.6	−4.0	.....	97	4.24	nnw.	24.4	
8:33	963.3	−2.1	83	nnw.	10.3	1,573	834.9	−4.4	0.56	97	4.09	nnw.	24.5	Kites broke away.

November 18, 1918 (No. 2).

P. M.														
1:40	961.8	0.8	84	nnw.	11.2	444	961.8	0.8	.....	84	5.43	nnw.	11.2	10/10 St.Cu., nnw.
						500	954.9	0.1	.....	86	5.29	nnw.	12.1	
1:45	961.8	0.8	84	nnw.	10.3	738	926.9	−2.9	1.26	94	4.51	nnw.	15.7	
						750	925.4	−2.7	.....	94	4.59	nnw.	15.8	
						1,000	896.9	0.7	.....	98	6.30	nnw.	17.3	
1:47	961.8	0.8	84	nnw.	10.3	1,007	896.2	0.8	−1.38	98	6.34	nnw.	17.4	Altitude of St.Cu. base about 1,350 m.
						1,250	869.0	−0.8	.....	99	5.65	nnw.	16.9	
						1,500	842.3	−2.4	.....	100	5.00	nnw.	16.4	
2:05	961.8	0.9	83	nnw.	11.2	1,586	833.5	−2.9	0.64	100	4.80	nnw.	16.2	
						1,750	816.9	−2.1	.....	92	4.72	nnw.	15.7	
						2,000	791.8	−0.9	.....	79	4.48	nnw.	15.0	
2:17	961.8	1.0	82	nnw.	11.2	2,053	786.1	−0.6	−0.49	76	4.42	nnw.	14.8	10/10 St. Cu., nnw.; head kite collapsed and dived to ground at 2:18 p. m.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 19, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity		Wind.		Remarks
				Dir.	Vel.					Rel.	Vap pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:48	963.0	−2.3	96	n.	8.0	444	963.0	−2.3	.....	96	4.84	n.	8.0	10/10 St., n.; altitude of St. base about 600 m.
						500	956.2	−2.6	.....	96	4.72	n.	.....	
7:56	963.1	−2.3	96	n.	7.6	734	928.3	−5.4	1.07	100	3.88	n.	.....	
						750	926.5	−5.1	.....	98	3.90	n.	.....	
8:07	963.1	−2.4	96	n.	8.0	1,000	898.0	−0.5	.....	74	4.31	n.	.....	
						1,160	880.0	2.5	−1.85	59	4.31	n.	12.5	
						1,250	870.5	2.3	.....	58	4.18	n.	12.5	
						1,500	843.9	1.9	.....	55	3.88	n.	12.6	
						1,750	818.0	1.4	.....	53	3.58	n.	12.7	
8:24	963.3	−2.5	96	n.	8.9	1,904	802.5	1.1	0.19	51	3.38	n.	12.7	
						2,000	792.8	0.8	.....	48	3.11	n.	12.4	
						2,250	768.4	−0.1	.....	40	2.42	n.	11.5	
						2,500	745.3	−0.9	.....	32	1.81	n.	10.6	
8:45	963.4	−2.4	94	n.	8.5	2,528	742.4	−1.0	0.34	31	1.74	n.	10.5	
						2,750	722.7	−1.1	.....	31	1.73	n.	10.6	
						3,000	700.7	−2.5	.....	30	1.49	n.	11.4	
						3,250	678.9	−3.9	.....	29	1.28	n.	12.4	
						3,500	657.7	−5.4	.....	29	1.13	n.	13.1	
						3,750	636.4	−6.8	.....	28	0.96	n.	14.0	
9:17	963.5	−2.2	94	n.	8.9	3,821	630.1	−8.3	0.58	27	0.82	n.	14.9	
						3,750	636.4	−7.9	.....	27	0.84	n.	14.9	
						3,500	657.7	−6.4	.....	25	0.89	n.	15.0	
						3,250	678.4	−4.9	.....	24	0.97	n.	15.0	
						3,000	700.0	−3.4	.....	23	1.06	n.	15.0	
						2,750	722.2	−2.0	.....	21	1.09	n.	15.1	
9:33	963.5	−2.1	94	n.	8.9	2,692	727.5	−1.6	0.41	21	1.12	n.	15.1	
						2,500	745.3	−0.8	.....	23	1.31	n.	14.4	
						2,250	769.1	0.2	.....	26	1.61	n.	13.5	
						2,000	793.5	1.2	.....	29	1.93	n.	12.5	
9:47	963.5	−2.0	94	nnw.	7.6	1,908	802.5	1.6	0.24	30	2.06	n.	12.2	
						1,750	818.1	2.0	.....	32	2.26	n.	11.7	
						1,500	843.9	2.6	.....	34	2.51	n.	10.9	
10:00	963.5	−2.0	94	nnw.	7.2	1,250	870.6	3.2	−1.63	37	2.85	n.	10.1	
						1,000	898.4	−0.9	.....	58	3.28	nne.	11.3	
10:08	963.5	−2.0	94	nnw.	7.6	809	920.1	−4.0	0.60	74	3.23	nne.	12.2	
						750	927.0	−3.6	.....	77	3.48	nne.	11.4	Altitude of St. base about 600 m.
						500	956.7	−2.1	.....	90	4.62	nnw.	8.0	
10:16	963.5	−1.8	93	nnw.	7.2	444	963.5	−1.8	.....	93	4.89	nnw.	7.2	10/10 St., n.

November 20, 1918.

A. M.														
8:00	971.6	−1.8	92	nnw.	10.3	444	971.6	−1.8	.....	92	4.84	nnw.	10.3	10/10 St., nnw.
						500	964.9	−2.2	.....	92	4.68	nnw.	11.2	Altitude of St. base about 700 m.
						750	934.8	−4.1	.....	90	3.90	n.	15.2	
8:09	971.8	−1.8	92	nnw.	9.8	852	922.9	−4.9	0.76	89	3.60	n.	16.8	
						1,000	905.5	−5.4	.....	88	3.41	n.	15.9	
						1,250	877.0	−6.3	.....	87	3.12	n.	14.4	
						1,500	850.0	−7.1	.....	87	2.91	n.	13.0	
8:31	972.1	−1.7	92	nnw.	10.7	1,626	836.4	−7.6	0.35	86	2.76	n.	12.2	
8:44	972.3	−1.6	92	nnw.	10.7	1,744	824.1	−3.9	−3.13	44	1.94	n.	11.9	
						1,750	823.7	−3.9	.....	44	1.94	n.	11.9	
						2,000	798.4	−4.2	.....	37	1.59	n.	12.3	
						2,250	773.8	−4.5	.....	30	1.26	n.	12.6	
9:37	973.0	−1.5	92	nnw.	10.3	2,501	748.8	−4.8	0.15	23	0.94	n.	13.0	
						2,250	773.8	−4.3	.....	29	1.24	n.	12.5	
						2,000	798.4	−3.9	.....	35	1.54	n.	12.0	
10:14	973.3	−1.2	92	nnw.	10.3	1,852	813.4	−3.6	−5.68	38	1.72	n.	11.7	
10:22	973.3	−1.1	92	nnw.	10.7	1,764	822.6	−8.6	0.49	74	2.18	n.	11.4	
						1,750	823.7	−8.5	.....	74	2.19	n.	11.4	
						1,500	850.0	−7.3	.....	78	2.57	n.	10.6	
						1,250	878.1	−4.1	.....	82	3.55	n.	9.8	
						1,000	907.4	−4.9	.....	86	3.48	n.	9.1	
11:00	973.3	−0.7	86	nnw.	11.2	880	921.3	−4.3	0.85	88	3.75	n.	8.7	Altitude of St. base about 750 m.
						750	936.8	−3.2	.....	87	4.07	n.	10.1	
						500	966.8	−1.1	.....	85	4.73	nnw.	12.8	
11:14	973.3	−0.6	84	nnw.	13.4	444	973.3	−0.6	.....	84	4.88	nnw.	13.4	10/10 St., nnw.

November 21, 1918.

A. M.														
8:09	978.9	−5.9	89	nne.	8.9	444	978.9	−5.9	.....	89	3.30	nne.	8.9	10/10 St., nne.; light snow.
						500	972.1	−6.5	.....	90	3.18	nne.	8.9	
						750	941.2	−9.1	.....	93	2.61	nne.	8.7	
8:17	979.0	−5.9	89	nne.	8.9	794	935.9	−9.6	1.06	94	2.53	nne.	8.7	Altitude of St. base about 800 m.
						1,000	911.2	−10.9	.....	92	2.20	nne.	(*)	
						1,250	882.2	−12.5	.....	90	1.86	nne.	(*)	
9:10	979.7	−6.0	89	nne.	8.9	1,290	876.8	−12.8	0.63	89	1.80	nne.	(*)	
9:17	979.6	−6.0	89	nne.	8.9	1,492	855.0	−9.7	−1.58	90	2.40	nne.	(*)	
9:32	979.5	−6.0	89	nne.	8.9	1,298	876.8	−12.7	0.62	90	1.84	nne.	(*)	
						1,250	882.2	−12.4	.....	90	1.88	nne.	(*)	
						1,000	911.2	−10.9	.....	91	2.17	nne.	(*)	
9:45	979.5	−6.0	89	nne.	10.3	798	935.9	−9.6	1.02	92	2.47	nne.	(*)	
						750	941.2	−9.1	.....	92	2.59	nne.	(*)	
						500	972.4	−6.6	.....	90	3.15	nne.	(*)	
10:00	979.4	−6.0	89	nne.	10.7	444	979.4	−6.0	.....	89	3.28	nne.	10.7	10/10 St., nne.; light snow.

*Instrument did not record; ice on wire.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 22, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:15	985.6	−11.4	78	n.	6.7	444	985.6	−11.4		78	1.79	n.	6.7	10/10 St., nne.; light snow.
						500	978.0	−12.0		78	1.69	n.	7.0	
8:32	985.7	−11.3	74	n.	7.2	700	953.2	−14.4	1.17	79	1.37	n.	8.2	
						750	946.4	−14.8		80	1.34	n.	7.7	
						1,000	915.8	−16.9		85	1.17	nne.	5.0	
9:50	985.6	−11.0	74	nne.	4.5	1,063	908.2	−17.4	0.78	86	1.14	nne.	4.3	Altitude of St. base about 1,000 m.
						1,000	915.8	−17.0		86	1.18	nne.	4.4	
						750	946.4	−15.2		86	1.39	nne.	4.9	
10:00	985.5	−11.0	74	nne.	5.8	672	956.5	−14.6	1.58	86	1.47	nne.	5.1	
						500	978.0	−11.9		77	1.69	nne.	5.3	
10:04	985.5	−11.0	74	nne.	5.4	444	985.5	−11.0		74	1.75	nne.	5.4	10/10 St., nne.; light snow.

November 23, 1918.

P. M.														
2:37	974.0	−1.0	34	wsw.	4.9	444	974.0	−1.0		34	1.91	wsw.	4.9	3/10 Ci.St., ne.
						500	966.8	−1.3		35	1.97	wsw.	5.0	
3:49	973.4	−1.8	37	wsw.	5.4	734	933.3	−4.6	1.24	57	2.37	wsw.	5.9	
						750	931.0	−4.6		56	2.32	wsw.	5.9	
						1,000	905.9	−5.0		39	1.56	sw.	5.6	
5:00	972.6	−4.8	62	wsw.	3.6	1,110	893.3	−5.2	0.16	31	1.22	sw.	5.5	1/10 Ci.St., ne.; 2/10 A.Cu., ese.; 2/10 A.St., ese.
						1,250	877.0	−5.4		30	1.16	ssw.	5.2	
						1,500	849.3	−5.6		29	1.10	s.	4.7	
						1,750	822.7	−5.9		28	1.04	s.	4.2	
5:11	972.5	−5.5	65	wsw.	3.6	1,879	809.7	−6.1	0.09	27	0.99	sse.	3.9	6/10 A.Cu., ese.; 2/10 A.St., ese.
						1,750	822.7	−6.0		27	0.99	ssw.	4.1	
						1,500	849.3	−5.9		28	1.04	s.	4.6	
5:24	972.4	−5.8	68	wsw.	3.6	1,359	865.1	−5.8	0.10	28	1.05	ssw.	4.9	
						1,250	877.0	−5.6		28	1.07	sw.	5.1	
						1,000	905.4	−5.4		29	1.13	wsw.	5.5	
5:39	972.2	−5.9	69	wsw.	4.0	846	923.7	−5.3	−0.12	30	1.17	w.	5.7	
						750	931.0	−5.4		30	1.51	w.	5.3	
						500	965.3	−5.7		62	2.34	wsw.	4.2	
5:43	972.1	−5.8	67	wsw.	4.0	444	972.1	−5.8		67	2.51	wsw.	4.0	6/10 A.Cu., ese.; 3/10 A.St., ese.

November 24, 1918.

A. M.														
9:10	963.8	−10.2	87	sw.	2.7	444	963.8	−10.2		87	2.22	sw.	2.7	Few A.Cu., s.
						500	956.6	− 9.7		83	2.22	sw.	3.8	
						750	926.0	− 7.5		65	2.10	wsw.	8.8	
9:19	963.7	−10.0	87	sw.	3.6	797	920.8	− 7.1	−0.88	61	2.04	wsw.	9.7	
						1,000	896.9	− 6.4		53	1.89	sw.	7.9	
9:51	963.5	− 7.8	88	wsw.	4.0	1,232	870.9	− 5.5	−0.37	43	1.65	sw.	5.9	
						1,250	868.8	− 5.5		43	1.65	sw.	5.8	
						1,500	841.9	− 5.0		37	1.48	sw.	4.1	
						1,750	815.7	− 4.5		30	1.26	sw.	2.5	Few A.St., ssw.
11:10	963.0	− 4.3	77	wsw.	4.5	1,967	793.4	− 4.1	−0.08	25	1.08	sw.	1.1	
						1,750	815.7	− 4.0		24	1.05	sw.	2.9	
						1,500	841.9	− 3.9		22	0.97	sw.	4.9	
11:24	962.9	− 4.0	77	wsw.	4.5	1,447	847.4	− 3.9	−0.40	22	0.97	sw.	5.3	
						1,250	868.8	− 4.7		23	0.96	sw.	5.3	
						1,000	893.9	− 5.7		25	0.94	wsw.	5.3	
11:33	962.8	− 3.8	77	wsw.	4.5	765	924.1	− 6.6	0.87	27	0.94	wsw.	5.3	
						750	926.0	− 6.5		29	1.02	wsw.	5.3	
						500	955.9	− 4.3		68	2.90	wsw.	5.7	
11:40	962.7	− 3.8	77	wsw.	5.8	444	962.7	− 3.8		77	3.42	wsw.	5.8	Few A.St., ssw.

November 25, 1918.

A. M.														
8:28	968.4	−4.1	85	n.	4.5	444	968.4	−4.1		85	3.72	n.	4.5	10/10 St., ne.
						500	961.3	−4.5		87	3.65	n.	4.9	
						750	931.7	−6.2		93	3.37	ne.	6.5	
9:03	968.9	−3.3	84	nne.	3.6	845	920.7	−6.9	0.70	95	3.24	ne.	7.1	Altitude of St. base about 1,000 m.
						1,000	902.8	−7.9		97	3.03	ne.	5.4	
9:52	969.8	−2.8	77	nne.	5.4	1,127	888.7	−8.7	0.64	98	2.85	ne.	4.0	
						1,250	874.3	−7.5		85	2.78	ne.	5.4	
						1,500	847.0	−4.9		63	2.55	ne.	8.2	
9:57	969.9	−2.8	76	nne.	5.4	1,695	826.5	−2.9	−1.01	45	2.16	ne.	10.4	
						1,500	847.0	−4.9		55	2.23	ne.	8.5	
						1,250	874.3	−7.4		68	2.22	ne.	6.1	
10:02	969.9	−2.8	76	nne.	4.9	1,127	888.7	−8.6	0.29	74	2.18	ne.	4.9	
						1,000	903.1	−8.2		82	2.49	ne.	4.8	Altitude of St. base about 1,050 m.
10:11	970.1	−2.7	74	ne.	4.5	855	920.7	−7.8	1.22	92	2.90	ne.	4.6	
						750	933.0	−6.5		88	3.11	ne.	4.6	
						500	963.3	−3.4		76	3.50	ne.	4.5	
10:19	970.2	−2.7	74	ne.	4.5	444	970.2	−2.7		74	3.61	ne.	4.5	10/10 St., ne.

November 26, 1918.

8:18	965.9	−11.7	92	wsw.	4.5	444	965.9	−11.7		92	2.08	wsw.	4.5	Cloudless.
						500	958.9	−10.5		88	2.18	wsw.	5.7	
						750	929.0	− 5.3		70	2.74	wnw.	11.3	
8:30	965.9	−11.2	90	w.	3.1	923	908.5	− 1.7	−2.09	57	3.02	nw.	15.1	
						1,000	899.6	− 1.3		54	2.96	nw.	14.4	
						1,250	871.8	− 0.1		45	2.73	wnw.	12.2	
						1,500	845.4	1.1		36	2.38	w.	10.0	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 26, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:50	965.9	− 8.4	82	w.	4.0	1,594	835.8	1.5	−0.48	33	2.25	w.	9.2	
						1,750	819.5	0.6		31	1.98	w.	9.4	
						2,000	794.3	− 0.9		29	1.64	wnw.	9.6	
9:14	965.8	− 6.5	75	w.	4.9	2,236	771.7	− 2.3	0.59	26	1.31	wnw.	9.9	
						2,250	769.7	− 2.4		26	1.30	wnw.	10.0	
						2,500	746.0	− 3.3		25	1.11	wnw.	10.2	
						2,750	723.2	− 4.2		25	1.08	wnw.	10.6	
						3,000	700.9	− 5.1		24	0.96	nw.	10.9	
						3,250	679.0	− 6.0		23	0.85	nw.	11.2	
10:14	965.3	− 4.5	72	w.	4.5	3,303	674.4	− 6.2	0.37	23	0.83	nw.	11.3	
						3,500	657.5	− 7.4		23	0.75	nw.	11.1	
						3,750	636.6	− 8.8		24	0.69	nw.	10.8	
						4,000	615.8	−10.3		24	0.61	nw.	10.5	
11:04	964.4	− 3.3	72	w.	5.4	4,079	609.8	−10.8	0.64	24	0.58	nw.	10.4	Few Cl.St., w.
						4,000	615.8	−10.3		24	0.61	nw.	10.6	
						3,750	636.0	− 8.6		24	0.71	nw.	11.2	
						3,500	656.3	− 6.9		24	0.82	nw.	11.8	
11:27	964.1	− 2.6	70	wnw.	4.0	3,401	664.4	− 6.2	0.49	24	0.87	nw.	12.0	
						3,250	677.3	− 5.5		24	0.92	nw.	11.9	
						3,000	699.1	− 4.2		24	1.03	nw.	10.8	
						2,750	721.9	− 3.0		23	1.09	wnw.	10.0	
						2,500	744.8	− 1.8		23	1.21	wnw.	9.2	
11:46	963.7	− 1.7	67	wnw.	6.7	2,486	746.2	− 1.7	0.46	23	1.22	wnw.	9.2	
						2,250	768.0	− 0.7		23	1.32	wnw.	9.2	
						2,000	792.7	0.5		22	1.39	wnw.	9.3	
						1,750	818.1	1.7		22	1.52	wnw.	9.3	
11:59	963.5	− 1.2	65	w.	6.3	1,683	825.0	2.0	−0.34	22	1.55	wnw.	9.3	
						1,500	844.0	1.4		22	1.49	wnw.	8.6	
						1,250	870.6	0.5		23	1.46	wnw.	7.7	
						1,000	898.1	− 0.3		23	1.37	wnw.	6.7	
P. M.														
12:18	963.5	− 0.6	66	w.	3.6	926	906.9	− 0.6	−0.51	23	1.34	wnw.	6.4	
12:20	963.5	− 0.5	66	wnw.	4.0	750	926.9	− 1.5		29	1.56	wnw.	6.2	
						572	948.0	− 2.4	1.56	36	1.80	wnw.	6.0	
						500	956.7	− 1.3		53	2.90	wnw.	4.9	
12:29	963.5	− 0.4	66	wnw.	4.0	444	963.5	− 0.4		66	3.90	wnw.	4.0	3/10 A.St., wnw.

November 27, 1918.

A. M.														
8:02	950.3	−10.8	93	sw.	3.6	444	950.3	−10.8		93	2.25	sw.	3.6	Few A.Cu., w.
						500	943.5	− 8.5		84	2.49	sw.	5.2	
						750	914.5	3.1		46	3.51	w.	12.5	
8:08	950.3	−10.8	93	ssw.	3.6	805	908.0	5.6	−4.54	37	3.37	w.	14.1	
						1,000	886.4	5.8		31	2.86	wsw.	14.2	
						1,250	859.6	6.0		22	2.06	sw.	14.4	
8:24	950.3	−10.8	90	sw.	4.5	1,290	855.4	6.1	−0.10	21	1.98	sw.	14.4	
						1,500	833.5	5.2		20	1.77	sw.	13.1	
						1,750	808.5	4.2		19	1.57	wsw.	11.5	
						2,000	783.8	3.1		18	1.37	w.	9.9	
8:52	950.3	−10.0	87	ssw.	3.6	2,028	781.4	3.0	0.42	18	1.36	w.	9.7	
						2,250	760.0	1.5		18	1.23	wsw.	9.4	
						2,500	737.0	− 0.2		17	1.08	wsw.	9.1	
						2,750	714.5	− 1.9		17	0.89	sw.	8.7	
						3,000	692.2	− 3.6		16	0.72	sw.	8.4	
10:56	950.3	− 2.1	65	sw.	3.6	3,227	672.0	− 5.1	0.62	16	0.64	ssw.	8.1	3/10 Cl. St., s.; 3/10 Cl.Cu., s.
						3,000	692.2	− 3.9		16	0.71	ssw.	8.8	
						2,750	714.5	− 2.5		17	0.84	ssw.	9.6	
						2,500	737.0	− 1.1		17	0.95	sw.	10.5	
						2,250	760.0	0.2		18	1.12	sw.	11.3	
11:22	950.3	− 0.4	52	sw.	3.1	2,055	778.4	1.3	0.53	18	1.21	sw.	11.9	
						2,000	783.8	1.6		18	1.23	sw.	11.7	
						1,750	808.5	2.9		18	1.36	sw.	10.6	
						1,500	833.5	4.2		17	1.40	wsw.	9.5	
11:39	950.3	0.1	48	sw.	3.1	1,335	850.7	5.1	−0.83	17	1.49	wsw.	8.8	
						1,250	859.6	4.8		18	1.55	wsw.	8.7	
						1,000	886.4	2.3		24	1.73	n.	7.7	
11:52	950.3	2.0	45	sw.	3.1	796	909.6	0.6	0.45	28	1.79	n.	7.0	
						750	914.5	0.8		30	1.94	n.	6.5	
						500	943.5	1.9		44	3.08	wsw.	3.7	
11:57	950.3	2.2	47	sw.	3.1	444	950.3	2.2		47	3.37	sw.	3.1	3/10 Cl. St,. s.

November 28, 1918.

A. M.														
8:05	950.6	−6.8	75	nw.	6.7	444	950.6	− 6.8		75	2.58	nw.	6.7	Few Cl.St., sw.
						500	943.9	− 6.2		73	2.64	nw.	8.3	
						750	914.5	− 3.4		67	3.08	n.	15.3	
8:14	950.7	−6.5	74	nw.	6.7	845	903.5	− 2.3	−1.12	64	3.23	n.	18.0	
						1,000	885.4	− 3.2		63	2.95	n.	18.0	
						1,250	858.0	− 4.6		62	2.57	nnw.	18.1	
8:32	950.8	−6.0	74	nw.	7.2	1,476	834.0	− 5.9	0.57	60	2.23	nnw.	18.2	
						1,500	831.2	− 6.1		60	2.19	nnw.	18.2	
						1,750	805.0	− 7.9		60	1.87	nnw.	18.2	
						2,000	779.5	− 9.8		60	1.58	nnw.	18.2	
						2,250	754.7	−11.7		61	1.36	nnw.	18.3	
8:51	950.9	−5.2	73	nw.	7.6	2,466	733.9	−13.3	0.75	61	1.18	nnw.	18.3	
						2,500	730.3	−13.4		61	1.17	nnw.	18.1	
						2,750	706.6	−13.9		57	1.04	nnw.	16.7	
						3,000	683.8	−14.4		54	0.94	nnw.	15.2	
9:38	950.7	−2.8	62	nw.	7.6	3,117	673.8	−14.7	0.22	52	0.88	nnw.	14.5	
						3,250	661.9	−15.3		52	0.83	nnw.	14.6	
						3,500	640.3	−16.5		51	0.73	nnw.	14.8	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 28, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
						3,750	619.3	−17.7	.....	50	0.64	nnw.	15.1	
						4,000	598.8	−18.9	.....	49	0.56	nnw.	15.3	
10:04	950.6	−1.9	59	nw.	8.0	4,026	596.8	−19.0	0.45	49	0.55	nnw.	15.3	
						4,000	598.8	−18.9	.....	49	0.56	nnw.	15.3	
						3,750	619.3	−17.8	.....	49	0.62	nnw.	15.4	
						3,500	640.3	−16.8	.....	49	0.68	nnw.	15.6	
						3,256	661.9	−15.7	.....	49	0.76	nnw.	15.7	
10:31	950.6	−1.0	57	nw.	10.7	3,067	678.1	−14.9	0.36	49	0.82	nnw.	15.8	
						3,000	683.8	−14.7	.....	50	0.85	nnw.	15.8	
						2,750	706.6	−13.7	.....	53	0.99	nnw.	15.8	
						2,500	730.3	−12.8	.....	55	1.11	nnw.	15.9	
						2,250	755.1	−11.9	.....	58	1.27	nnw.	15.9	
11:00	950.6	−0.2	55	nw.	8.0	2,162	763.8	−11.6	0.94	59	1.33	nnw.	15.9	
						2,000	780.1	−10.1	.....	59	1.52	nnw.	15.1	
						1,750	805.7	− 7.8	.....	59	1.86	nnw.	13.9	
						1,500	831.9	− 5.4	.....	60	2.33	nnw.	12.6	
11:20	950.5	0.9	54	nw.	11.6	1,350	848.0	− 4.0	0.52	60	2.62	nnw.	11.9	
						1,250	858.8	− 3.5	.....	60	2.74	nnw.	12.1	
						1,000	886.3	− 2.2	.....	59	3.00	nnw.	12.5	
11:36	950.4	1.0	52	nw.	8.9	849	903.5	− 1.4	0.10	59	3.21	nnw.	12.7	
						750	914.8	− 0.6	.....	57	3.31	nnw.	11.8	
						500	943.9	1.4	.....	53	3.58	nw.	9.4	
11:42	950.4	1.8	52	nw.	8.9	444	950.4	1.8	.....	52	3.62	nw.	8.9	Few Cl.St., sw.

November 29, 1918, series (No. 1).

A. M.														
8:01	963.8	−6.1	82	nw.	5.8	444	963.8	− 6.1	.....	82	2.99	nw.	5.8	2/10 A.Cu., nw.; 7/10 St., nw.
						500	956.8	− 6.0	.....	79	2.91	nw.	7.2	
						750	926.6	− 5.5	.....	66	2.53	nnw.	13.5	
8:10	963.9	−6.1	77	nw.	5.8	845	915.8	− 5.3	−0.20	61	2.39	nnw.	15.9	
						1,000	897.6	− 6.3	.....	60	2.15	nnw.	16.0	
						1,250	869.0	− 7.9	.....	57	1.78	nw.	16.1	
						1,500	841.8	− 9.5	.....	55	1.49	nw.	16.3	
8:28	964.1	−6.0	80	nw.	5.4	1,529	838.8	− 9.7	0.64	55	1.47	nw.	16.3	
						1,750	815.0	−11.6	.....	58	1.30	nw.	16.3	
						2,000	788.6	−13.8	.....	61	1.12	nw.	16.3	
						2,250	763.4	−16.0	.....	65	0.98	nw.	16.3	
8:46	964.3	−5.6	80	nw.	5.4	2,269	761.5	−16.2	0.88	65	0.96	nw.	16.3	
						2,500	738.6	−18.8	.....	71	0.82	nw.	(*)	8/10 A.Cu., nw.; altitude of A.Cu. base about 3,100 m.
						2,750	714.4	−20.3	.....	74	0.74	wnw.	(*)	
						3,000	690.6	−22.4	.....	78	0.63	wnw.	(*)	
9:54	964.8	−4.0	70	nw.	5.8	3,041	686.7	−22.8	0.85	79	0.62	wnw.	(*)	
10:02	964.8	−4.0	70	nw.	5.4	3,149	676.7	−22.4	0.14	81	0.66	wnw.	(*)	
						3,000	690.6	−21.4	.....	80	0.72	wnw.	(*)	3/10 A.Cu., nw.
						2,750	714.4	−19.8	.....	79	0.83	wnw.	(*)	
						2,500	739.0	−18.1	.....	77	0.95	nw.	(*)	
						2,250	763.9	−16.5	.....	78	1.12	nw.	(*)	
11:04	964.8	−1.3	64	nw.	8.9	2,214	767.5	−16.2	0.86	75	1.11	nw.	13.0	
						2,000	789.0	−14.4	.....	74	1.29	nw.	13.4	
						1,750	815.5	−12.2	.....	73	1.55	nw.	13.8	
						1,500	842.8	−10.0	.....	71	1.85	nw.	14.3	
11:34	964.8	−1.0	61	nw.	8.9	1,494	843.4	−10.0	0.65	71	1.85	nw.	14.3	
						1,250	870.5	− 8.4	.....	75	2.24	nw.	12.6	
						1,000	899.0	− 6.8	.....	79	2.72	nw.	10.8	
11:59	964.8	−0.6	61	nw.	8.5	745	928.8	− 5.1	1.50	84	3.34	nw.	9.0	
						500	957.8	− 1.4	.....	65	3.54	nw.	8.9	
P. M.														
12:05	964.8	−0.6	61	nw.	8.9	444	964.8	− 0.6	.....	61	3.54	nw.	8.9	3/10 St.Cu., nw.

November 29, 1918, series (No. 2).

P. M.														
12:20	964.6	0.0	60	nw.	7.2	444	964.6	0.0	.....	60	3.67	nw.	7.2	3/10 St.Cu., nw.
						500	957.9	− 0.9	.....	62	3.52	nw.	7.2	
12:29	964.5	0.0	60	nw.	8.0	693	934.7	− 3.7	1.55	67	3.00	nw.	7.4	
						750	927.5	− 4.2	.....	68	2.92	nw.	7.8	
						1,000	898.4	− 6.4	.....	73	2.60	nw.	9.5	
12:40	964.4	0.4	58	nw.	8.0	1,220	873.8	− 8.4	0.89	77	2.30	nw.	11.1	
						1,250	870.1	− 8.6	.....	76	2.23	nw.	11.2	Altitude of St.Cu. base about 1,250 m.
						1,500	842.3	−10.2	.....	71	1.81	nw.	12.2	
						1,750	815.4	−11.8	.....	66	1.46	nw.	13.2	
						2,000	789.0	−13.4	.....	61	1.17	nw.	14.2	
1:01	964.2	0.0	57	nw.	6.3	2,145	774.2	−14.3	0.64	58	1.02	nw.	14.8	
						2,250	763.4	−14.9	.....	57	0.95	nw.	15.0	
						2,500	738.4	−16.2	.....	56	0.83	nw.	15.6	
						2,750	714.3	−17.5	.....	54	0.70	nw.	16.1	
						3,000	691.0	−18.9	.....	53	0.60	nw.	16.7	
						3,250	668.0	−20.2	.....	52	0.53	nw.	17.2	
1:32	963.8	0.3	58	nw.	6.3	3,322	661.5	−20.6	0.54	51	0.49	nw.	17.4	
						3,500	645.8	−22.0	.....	53	0.45	nw.	17.6	
						3,750	623.9	−24.1	.....	55	0.38	nnw.	18.0	
1:57	963.5	0.9	58	nw.	8.0	3,961	606.2	−25.7	0.80	57	0.33	nnw.	18.3	
						4,000	602.9	−25.7	.....	57	0.33	nnw.	18.3	
						4,250	583.0	−25.6	.....	53	0.31	nnw.	18.3	8/10 A.Cu., nw.
2:10	963.4	1.0	59	nw.	7.6	4,282	580.5	−25.6	−0.34	53	0.31	nnw.	18.3	
						4,250	583.0	−25.8	.....	53	0.31	nnw.	18.3	
2:21	963.4	1.0	60	nw.	7.6	4,131	592.7	−26.6	0.72	55	0.29	nnw.	18.3	
						4,000	602.9	−25.7	.....	56	0.32	nnw.	18.2	
						3,750	623.9	−23.9	.....	59	0.41	nnw.	18.1	
						3,500	645.8	−22.1	.....	61	0.51	nnw.	17.9	

*Anemometer frozen.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 29, 1918, series (No. 2)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:50	963.2	1.2	61	nw.	6.7	3,230	668.7	−20.3	0.64	64	0.64	nnw.	17.7	
						3,000	691.5	−18.7		64	0.74	nnw.	16.6	
						2,750	714.9	−17.1		64	0.86	nnw.	15.6	
						2,500	738.9	−15.5		64	1.00	nnw.	14.5	
3:15	963.1	1.3	57	nw.	5.8	2,267	762.2	−14.0	0.71	64	1.16	nnw.	13.5	
						2,250	763.9	−13.9		64	1.17	nnw.	13.4	
						2,000	789.0	−12.1		64	1.38	nnw.	12.0	
						1,750	815.4	−10.3		63	1.59	nw.	10.6	
						1,500	842.3	− 8.5		62	1.84	nw.	9.3	
3:34	963.1	1.5	57	wnw.	4.9	1,312	862.9	− 7.2	0.78	62	2.06	nw.	8.2	
						1,250	869.8	− 6.7		62	2.15	nw.	8.2	
						1,000	897.9	− 4.8		62	2.53	nw.	8.1	
						750	927.0	− 2.8		61	2.95	wnw.	8.0	
3:47	963.1	1.2	51	wnw.	4.9	726	929.8	− 2.6	1.21	61	3.00	wnw.	8.0	
						500	956.4	0.1		54	3.32	nw.	5.5	
3:52	963.1	0.8	52	nw.	4.9	444	963.1	0.8		52	3.36	nw.	4.9	2/10 A.Cu., nw.; 2/10 St.Cu., nw.

November 29, 1918, series (No. 3).

P. M.														
4:08	963.1	0.8	52	nw.	4.0	444	963.1	0.8		52	3.36	nw.	4.0	2/10 A.Cu., nw.; 2/10 St.Cu., nw.
						500	956.3	0.3		53	3.31	nw.	4.8	
						750	926.8	− 1.8		59	3.10	wnw.	8.1	
4:16	963.1	0.8	52	nw.	4.0	815	919.3	− 2.4	0.86	60	3.00	wnw.	9.0	
						1,000	897.8	− 3.8		60	2.66	wnw.	10.1	
						1,250	870.0	− 5.6		59	2.25	nw.	11.7	
5:07	963.1	− 1.7	59	wnw.	4.0	1,462	846.7	− 7.2	0.74	58	1.93	nw.	13.0	
						1,500	842.6	− 7.5		58	1.87	nw.	13.1	
						1,750	815.8	− 9.4		62	1.70	nw.	13.9	
						2,000	789.5	−11.4		66	1.51	nw.	14.6	
						2,250	764.3	−13.4		70	1,34	nw.	15.4	
5:21	963.1	−3.0	72	wnw.	3.6	2,394	749.7	−14.5	0.78	72	1.25	nw.	15.9	
						2,500	739.4	−15.1		72	1.17	nw.	15.9	
						2,750	715.4	−16.6		72	1.02	nw.	15.9	
						3,000	691.7	−18.0		71	0.88	nw.	15.9	
5:37	963.1	−3.5	76	w.	4.5	3,116	681.1	−18.7	0.58	71	0.82	nw.	15.9	
						3,250	669.0	−19.6		71	0.76	nw.	17.4	3/10 A.St., nw.
						3,500	647.0	−21.3		70	0.64	nw.	20.3	
						3,750	625.1	−23.0		69	0.53	nw.	23.2	
6:03	963.1	−4.4	73	w.	4.0	3,800	620.8	−23.3	0.64	69	0.51	nw.	23.8	
						3,750	625.1	−23.0		69	0.53	nw.	23.5	
						3,500	647.0	−21.4		72	0.65	nw.	22.2	
						3,250	669.0	−18.9		74	0.84	nw.	20.8	
						3,000	691.7	−18.3		76	0.92	nw.	19.4	
						2,750	715.4	−16.8		79	1.10	nw.	18.0	
						2,500	739.4	−15.2		81	1.31	nw.	16.7	
6:48	963.1	−3.4	73	w.	4.0	2,382	751.2	−14.5	0.79	82	1.42	nw.	16.0	
						2,250	764.3	−13.5		83	1.57	nw.	16.0	
						2,000	789.5	−11.5		84	1.91	nw.	16.0	
						1,750	815.8	− 9.5		86	2.33	wnw.	16.0	
7:07	963.1	−3.4	73	sw.	3.6	1,619	829.7	− 8.5	0.90	87	2.58	wnw.	16.0	
						1,500	842.6	− 7.4		84	2.74	wnw.	15.6	
						1,250	870.0	− 5.2		76	2.99	wnw.	14.9	
						1,000	897.8	− 3.0		69	3.28	w.	14.1	
7:25	962.9	−3.1	74	sw.	4.0	826	917.7	− 1.4	−0.45	64	3.18	w.	13.6	
						750	926.8	− 1.7		66	3.50	w.	11.7	
						500	956.3	− 2.8		72	3.48	sw.	5.4	
7:31	962.9	−3.1	74	sw.	4.0	444	962.9	− 3.1		74	3.49	sw.	4.0	6/10 A.St., nw.

November 29, 1918, series (No. 4).

P. M.														
7:53	962.8	−3.0	74	sw.	3.6	444	962.8	− 3.0		74	3.52	sw.	3.6	6/10 A.St., nw.
						500	956.0	− 2.7		73	3.56	wsw.	5.5	
						750	926.3	− 1.2		66	3.65	w.	14.1	
7:56	962.8	−2.8	74	sw.	3.6	770	924.0	− 1.1	−0.58	66	3.68	w.	14.8	
						1,000	897.8	− 3.1		68	3.20	wnw.	15.1	
8:11	962.7	−2.2	71	sw.	4.0	1,211	874.1	− 4.9	0.86	70	2.84	wnw.	15.3	
						1,250	870.0	− 5.2		71	2.80	wnw.	15.4	
						1,500	842.3	− 7.3		76	2.59	wnw.	16.2	
						1,750	815.6	− 9.4		81	2.22	nw.	17.0	
						2,000	789.5	−11.4		86	1.97	nw.	17.8	
8:32	962.4	−1.5	65	sw.	4.9	2,211	768.0	−13.2	0.83	90	1.76	nw.	18.5	
						2,250	764.1	−13.4		90	1.72	nw.	18.5	
						2,500	739.2	−14.7		87	1.48	nw.	18.6	
						2,750	715.0	−16.0		84	1.26	nw.	18.7	
						3,000	691.6	−17.4		81	1.07	nw.	18.8	
						3,250	669.0	−18.7		78	0.90	nw.	18.9	
9:04	962.1	−1.8	69	sw.	4.5	3,389	658.5	−19.4	0.52	76	0.83	nw.	19.0	
						3,250	669.0	−18.7		77	0.89	nw.	18.9	5/10 A.St., nw.
						3,000	691.3	−17.4		79	1.04	nw.	18.8	
9:42	961.7	−2.4	74	wsw.	4.5	2,878	702.7	−16.8	0.62	80	1.11	nw.	18.8	
						2,750	714.3	−16.0		79	1.18	nw.	19.3	
						2,500	738.0	−14.5		78	1.35	nw.	20.2	
						2,250	762.8	−12.9		76	1.52	nw.	21.1	
10:03	961.5	−3.3	77	wsw.	4.5	2,198	768.0	−12.6	0.71	76	1.56	nw.	21.3	
						2,000	788.1	−11.2		76	1.77	nw.	19.6	
						1,750	814.3	− 9.4		77	2.11	nw.	17.5	
						1,500	841.2	− 7.6		77	2.47	nw.	13.6	
						1,250	868.6	− 5.9		78	2.89	nw.	13.3	
10:22	961.5	−3.8	77	wsw.	4.5	1,197	874.1	− 5.5	0.94	78	3.00	nw.	12.8	
						1,000	896.4	− 3.7		74	3.32	wnw.	12.2	
10:39	961.5	−3.4	74	wsw.	4.5	759	924.0	− 1.4	0.63	69	3.75	w.	11.4	
						750	925.1	− 1.5		69	3.72	w.	11.2	
						500	954.8	− 3.0		74	3.52	wsw.	5.7	
10:41	961.5	−3.4	75	wsw.	4.5	444	961.5	− 3.4		75	3.45	wsw.	4.5	2/10 A.St., nw.

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*——Continued.

November 29-30, 1918, series (No. 5).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
11:04	961.5	−3.4	78	wsw.	5.4	444	961.5	− 3.4		78	3.59	wsw.	5.4	2/10 A.St., nw.
						500	954.7	− 3.1		77	3.63	wsw.	6.7	
						750	925.1	− 1.8		73	3.84	wnw.	12.5	
11:08	961.4	−3.4	78	wsw.	5.4	799	919.5	− 1.5	−0.54	72	3.88	wnw.	13.6	
						1,000	896.3	− 2.6		71	3.44	wnw.	13.3	
11:26	961.3	−2.4	70	wsw.	5.8	1,253	868.1	− 4.4	0.64	69	2.91	wnw.	13.0	
						1,500	841.0	− 6.1		67	2.45	wnw.	15.4	
						1,750	814.3	− 7.9		65	2.03	wnw.	17.8	
11:34	961.3	−2.5	72	wsw.	6.3	1,877	801.3	− 8.8	0.71	64	1.85	wnw.	19.1	
						2,000	788.4	− 9.9		64	1.78	wnw.	18.7	
11:47	961.2	−3.0	78	w.	6.3	2,250	763.0	−12.1		75	1.61	nw.	18.0	
						2,398	748.5	−13.4	0.88	79	1.51	nw.	17.6	
						2,500	738.2	−13.8		80	1.47	nw.	18.1	
						2,750	714.3	−14.7		81	1.38	nw.	19.4	
						3,000	691.4	−15.6		83	1.29	nw.	20.8	
						3,250	669.0	−16.5		84	1.20	nw.	22.1	
A. M.														
12:31	961.1	−2.8	74	w.	6.3	3,408	654.9	−17.1	0.40	85	1.15	nw.	22.9	
						3,250	669.0	−16.4		84	1.22	nw.	21.7	6/10 A.St., nw.
						3,000	691.4	−15.4		83	1.32	nw.	19.7	
						2,750	714.3	−14.3		82	1.44	nw.	17.8	
						2,500	738.2	−13.3		81	1.56	nw.	15.8	
1:30	960.9	−3.9	82	w.	3.6	2,458	742.5	−13.1	0.70	81	1.59	nw.	15.5	
						2,250	763.0	−11.7		78	1.74	nw.	15.2	
						2,000	788.4	− 9.9		74	1.94	nw.	14.7	
1:45	960.9	−3.9	82	w.	2.7	1,857	802.9	− 8.9	0.87	72	2.06	nw.	14.5	
						1,750	814.3	− 8.0		70	2.17	nw.	14.3	
						1,500	840.7	− 5.8		64	2.40	nw.	13.7	
2:02	960.8	−4.6	81	w.	4.5	1,317	860.2	− 4.2	0.42	59	2.54	nw.	13.3	
						1,250	867.2	− 3.9		58	2.56	nw.	12.9	
						1,000	893.0	− 2.9		55	2.64	nw.	11.3	
2:16	960.7	−4.6	81	w.	4.9	819	916.2	− 2.1	−0.67	52	2.67	nw.	10.1	
						750	924.3	− 2.6		57	2.80	nw.	9.1	
						500	953.9	− 4.2		77	3.31	w.	5.7	
2:21	960.7	−4.6	81	w.	4.9	444	960.7	− 4.6		81	3.36	w.	4.9	Cloudless.

November 30, 1918, series (No. 6).

A. M.														
2:41	960.5	−5.2	83	w.	5.4	444	960.5	− 5.2		83	3.27	w.	5.4	Cloudless.
						500	953.9	− 4.7		78	3.21	w.	6.1	
						750	923.9	− 2.3		56	2.82	wnw.	9.1	
2:56	960.4	−6.0	89	w.	4.9	815	916.2	− 1.7	−0.94	50	2.65	wnw.	9.9	
						1,000	894.8	− 2.5		50	2.48	wnw.	11.4	
						1,250	866.9	− 3.5		51	2.33	wnw.	13.4	
3:05	960.4	−6.6	89	w.	4.5	1,485	841.6	− 4.5	0.42	51	2.14	wnw.	15.3	
						1,500	839.7	− 4.6		51	2.12	wnw.	15.4	
						1,750	812.9	− 6.2		57	2.06	wnw.	16.2	
						2,000	787.1	− 7.8		64	2.02	wnw.	17.1	
						2,250	762.2	− 9.5		70	1.90	nw.	18.0	
						2,500	738.2	−11.1		76	1.79	nw.	18.9	
3:32	960.2	−7.4	89	w.	5.4	2,621	726.5	−11.9	0.65	79	1.73	nw.	19.3	
						2,750	714.4	−12.5		80	1.66	nw.	19.6	
						3,000	691.5	−13.8		83	1.53	nw.	20.1	
						3,250	669.3	−15.1		85	1.39	nw.	20.7	Cloudless.
4:03	960.1	−7.4	89	w.	4.0	3,475	649.6	−16.2	0.52	87	1.29	nw.	21.2	
						3,250	669.3	−15.0		89	1.47	nw.	21.8	
						3,000	691.5	−13.7		91	1.69	nw.	22.5	
						2,750	714.4	−12.3		93	1.96	nw.	23.3	
4:47	959.3	−6.9	89	w.	5.4	2,391	729.4	−11.5	0.66	94	2.13	nw.	23.7	
						2,500	737.9	−10.9		91	2.17	nw.	23.2	
						2,250	761.8	− 9.3		84	2.32	nw.	21.7	2/10 A.St., nw.
						2,000	785.3	− 7.6		76	2.44	nw.	20.1	
						1,750	812.0	− 6.0		69	2.54	wnw.	18.6	
						1,500	838.9	− 4.3		62	2.64	wnw.	17.1	
5:20	958.8	−6.0	89	sw.	5.8	1,479	841.6	− 4.2	0.71	61	2.62	wnw.	17.0	
						1,250	865.9	− 2.6		55	2.71	wnw.	16.7	
						1,000	893.6	− 0.8		50	2.86	wnw.	16.4	
5:41	958.4	−5.6	85	wsw.	4.5	801	916.2	0.6	−1.74	45	2.87	wnw.	16.1	
						750	922.1	− 0.3		51	3.04	wnw.	14.4	
						500	951.3	− 4.6		79	3.28	wsw.	5.9	
5:47	958.3	−5.6	85	wsw.	4.0	444	958.3	− 5.6		85	3.26	wsw.	4.0	4/10 A.St., nw.

November 30, 1918, series (No. 7).

A. M.														
6:09	958.0	−6.0	85	wsw.	3.6	444	958.0	− 6.0		85	3.13	wsw.	3.6	4/10 A.St., nw.
						500	951.1	− 5.2		81	3.19	wsw.	5.2	
						750	921.6	− 1.4		60	3.26	w.	12.6	
6:19	958.0	−6.0	85	wsw.	3.6	887	905.9	0.7	−1.51	49	3.15	wnw.	16.7	
						1,000	892.9	0.1		49	3.01	wnw.	17.0	
						1,250	865.4	− 1.2		48	2.65	wnw.	17.6	
						1,500	838.9	− 2.5		48	2.38	wnw.	18.2	
6:31	957.9	−5.9	85	wsw.	4.0	1,509	837.9	− 2.6	0.53	48	2.36	wnw.	18.2	
						1,750	812.6	− 4.5		57	2.39	wnw.	19.1	3/10 A.St., nw.; 1/10 A.Cu., nw.
						2,000	787.0	− 6.4		66	2.35	wnw.	19.9	
6:43	957.8	−5.3	85	wsw.	4.0	2,091	778.2	− 7.2	0.79	70	2.32	wnw.	20.3	
						2,250	762.0	− 8.1		75	2.30	wnw.	21.3	
						2,500	737.7	− 9.4		83	2.27	nw.	23.0	
7:00	957.7	−4.9	81	wsw.	4.0	2,674	721.4	−10.4	0.55	88	2.21	nw.	24.1	4/10 A.St., nw.; 4/10 A.Cu., nw.
						2,750	714.0	−10.5		86	2.13	nw.	23.6	
						3,000	691.6	−11.0		80	1.90	nw.	22.1	
						3,250	669.5	−11.5		74	1.68	nw.	20.5	

TABLE 12.—*Free-air data from kite flights at Ellendale Aerological Station, November, 1918*—Continued.

November 30, 1918, series (No. 7)—Continued.

Surface.						At different heights above sea.									Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.			
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	*mb.*	*C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*		
7:14	957.7	−4.6	81	wsw.	3.6	3,303	664.8	−11.6	0.18	73	1.64	nw.	20.2		
						3,250	669.5	−11.5		75	1.70	nw.	20.3		
						3,000	691.6	−11.1		82	1.93	nw.	21.0		
						2,750	714.1	−10.6		89	2.19	nw.	21.7		
8:00	957.7	−4.7	81	wsw.	4.9	2,689	719.9	−10.5	0.62	91	2.26	nw.	21.9		
						2,500	737.5	− 9.3		86	2.37	nw.	20.7		
						2,250	762.0	− 7.8		79	2.40	nw.	19.1		
						2,000	787.0	− 6.2		72	2.61	nw.	17.5		
8:26	957.7	−4.2	80	wsw.	3.6	1,800	807.1	− 5.0	0.61	67	2.69	nw.	16.2		
						1,750	812.6	− 4.7		66	2.72	nw.	16.1		
						1,500	838.9	− 4.2		58	2.49	nw.	15.6		
						1,250	865.4	− 1.7		51	2.70	nw.	15.0		
8:39	957.7	−3.0	74	wsw.	5.8	1,142	877.1	− 1.0	−0.23	48	2.70	nw.	14.8		
						1,000	892.9	− 1.3		53	2.90	nw.	15.3		
8:45	957.7	−2.2	67	wsw.	6.3	801	915.6	− 1.8	0.06	60	3.16	nw.	16.1		
						750	921.5	− 1.8		61	3.21	nw.	14.8		
						500	950.9	− 1.6		66	3.53	w.	8.6		
8:51	957.7	−1.6	67	w.	7.2	444	957.7	− 1.6		67	3.58	w.	7.2	1/10 A.Cu., nw.	

November 30, 1918, series (No. 8).

A. M.															
9:13	957.7	−0.4	67	wnw.	8.5	444	957.7	− 0.4		67	3.96	wnw.	8.5	1/10 A.Cu., nw.	
						500	951.0	− 0.5		67	3.93	wnw.	10.0		
						750	921.8	− 1.0		65	3.65	nnw.	16.7		
9:19	957.7	0.0	67	wnw.	9.8	799	916.1	− 1.1	0.20	65	3.62	nnw.	18.0		
						1,000	893.3	− 0.5		57	3.34	nnw.	17.4		
9:26	957.7	0.7	59	wnw.	11.2	1,216	869.5	0.2	−0.31	47	2.91	nnw.	16.8		
						1,250	865.8	0.0		48	2.93	nnw.	16.9		
						1,500	838.8	− 1.2		54	2.99	nnw.	17.5		
						1,750	812.8	− 2.5		61	3.03	nw.	18.1		
						2,000	787.4	− 3.7		67	3.00	nw.	18.8		
9:40	957.7	0.7	59	nw.	11.2	2,097	778.3	− 4.2	0.50	70	3.01	nw.	19.0		
						2,250	762.8	− 5.2		71	2.80	nw.	20.0		
						2,500	749.0	− 6.8		73	2.51	nw.	21.5		
						2,750	715.9	− 8.4		75	2.24	nnw.	23.1	2/10 A.Cu.,nw.	
10:06	957.7	1.6	58	nw.	10.3	2,931	699.4	− 9.6	0.70	77	2.07	nnw.	24.2		
						2,750	715.9	− 8.3		76	2.30	nnw.	24.2		
						2,500	749.0	− 6.4		75	2.67	nw.	24.2		
						2,250	762.8	− 4.6		73	3.03	nw.	24.2		
10:37	957.7	1.8	58	nw.	12.1	2,094	778.3	− 3.4	0.24	72	3.31	nw.	24.2		
						2,000	787.4	− 3.2		72	3.37	nw.	23.1	7/10 A.Cu., nw.	
						1,750	812.8	− 2.6		74	3.64	nw.	20.1		
						1,500	838.8	− 2.0		75	3.88	nw.	17.2		
10:55	957.7	2.0	55	nnw.	12.1	1,300	860.1	− 1.5	−0.19	76	4.10	nw.	14.8		
						1,250	865.8	− 1.6		75	4.01	nw.	14.4		
						1,000	893.3	− 2.1		68	3.49	nnw.	12.2		
11:05	957.7	1.6	58	nnw.	8.5	870	908.0	− 2.3	0.92	65	3.28	nnw.	11.0		
						750	921.8	− 2.2		65	3.31	nnw.	11.0		
						500	951.0	1.1		59	3.91	nnw.	10.4		
11:15	957.6	1.6	58	nnw.	10.3	444	957.6	1.6		58	4.05	nnw.	10.3	8/10 A.Cu., nw.	

November 30, 1918, series (No. 9).

A. M.															
11:42	957.5	1.8	58	nnw.	10.3	444	957.5	1.8		58	4.04	nnw.	10.3	8/10 A.Cu., nw.	
						500	950.8	1.1		60	3.97	nnw.	10.4		
						750	921.5	− 1.8		69	3.63	nnw.	10.6		
11:49	957.5	1.6	61	nnw.	10.3	808	914.8	− 2.5	1.18	71	3.52	nnw.	10.7		
						1,000	892.8	− 3.6		77	3.48	nnw.	11.8		
12:00 noon	957.4	1.2	70	nnw.	10.7	1,077	884.2	− 4.1	0.50	79	3.42	nnw.	12.2		
						1,250	865.0	− 3.8		77	3.42	nnw.	13.5		
						1,500	838.2	− 3.4		75	3.45	nnw.	15.4		
P. M.															
12:34	957.6	1.2	59	nnw.	9.8	1,613	826.3	− 3.2	−0.17	74	3.46	nnw.	16.2		
						1,750	812.0	− 3.3		74	3.43	nnw.	17.1		
						2,000	786.8	− 3.6		74	3.34	nnw.	18.6		
						2,250	762.1	− 3.8		74	3.29	nnw.	20.2		
12:46	957.6	0.6	64	n.	8.9	2,374	750.4	− 3.9	0.09	74	3.27	nnw.	21.0		
						2,500	738.0	− 4.6		75	3.11	nnw.	21.3		
						2,750	714.9	− 6.0		76	2.80	nnw.	21.8		
						3,000	692.5	− 7.4		77	2.51	nnw.	22.3		
						3,250	670.8	− 8.8		78	2.25	nnw.	22.8	9/10 A.Cu., nw.	
						3,500	649.0	−10.2		79	2.01	nnw.	23.4		
1:20	957.9	−1.5	72	nne.	9.8	3,512	648.2	−10.3	0.46	79	2.00	nnw.	23.4		
						3,500	649.0	−10.2		79	2.01	nnw.	23.4		
						3,250	670.8	− 9.2		81	2.26	nnw.	22.5		
						3,000	692.5	− 8.2		83	2.52	nnw.	21.6		
						2,750	714.9	− 7.2		86	2.86	nnw.	20.7		
						2,500	738.0	− 6.2		88	3.19	nnw.	19.9		
1:51	958.3	−3.2	73	ne.	7.2	2,481	740.0	− 6.1	0.62	88	3.21	nnw.	19.8		
						2,250	762.1	− 4.7		84	3.46	nnw.	19.4		
2:12	958.4	−3.6	73	ne.	6.3	2,065	780.4	− 3.5	0.02	81	3.69	nw.	19.0		
						2,000	786.8	− 3.5		81	3.69	nw.	18.2		
						1,750	812.0	− 3.4		79	3.63	nw.	15.0		
						1,500	838.2	− 3.4		78	3.59	nnw.	11.8		
2:29	958.4	−4.0	74	ne.	6.3	1,247	865.2	− 3.3	−0.63	76	3.53	nnw.	8.5		
						1,000	892.8	− 4.9		78	3.16	n.	7.1		
2:38	958.4	−4.0	74	ne.	4.9	754	921.4	− 6.4	0.77	79	2.81	nne.	5.7		
						500	951.5	− 4.4		75	3.16	ne.	5.1		
2:42	958.4	−4.0	74	ne.	4.9	444	958.4	− 4.0		74	3.23	ne.	4.9	9/10 A.St., nw.	

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918.*

December 1, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
7:47	956.2	−6.4	79	nw.	10.7	444	956.2	−6.4	.....	79	2.81	nw.	10.7	9/10 St.Cu., nw.
						500	949.0	−6.7	.....	79	2.74	nw.	12.9	
						750	919.4	−8.2	.....	80	2.43	nw.	23.0	
7:54	956.3	−6.0	80	nw.	11.6	762	917.9	−8.3	0.60	80	2.42	nw.	23.5	
						1,000	890.4	−6.6	.....	83	2.90	nnw.	23.2	Altitude of St.Cu. base about 1,050 m.
8:04	956.4	−5.4	75	nw.	10.7	1,214	866.6	−5.1	−0.71	85	3.38	nnw.	22.9	
						1,250	862.4	−5.3	.....	86	3.36	nnw.	22.4	
						1,500	835.5	−6.9	.....	90	3.07	nnw.	18.7	
8:16	956.6	−5.4	75	nw.	8.9	1,721	812.2	−8.3	0.48	94	2.84	nnw.	15.4	
						1,500	835.5	−7.6	.....	94	3.02	nnw.	15.0	
8:40	956.9	−4.6	75	nnw.	11.2	1,274	860.3	−6.8	−0.14	93	3.20	nnw.	14.6	10/10 St., nnw.
						1,250	862.9	−6.8	.....	93	3.20	nnw.	14.6	
						1,000	891.2	−7.2	.....	93	3.05	nnw.	15.1	
9:00	957.1	−4.4	82	nnw.	12.1	771	917.9	−7.5	0.95	93	3.00	nnw.	15.6	
						750	920.4	−7.3	.....	92	3.03	nnw.	15.4	
						500	950.4	−4.9	.....	84	3.40	nnw.	12.3	
9:09	957.3	−4.4	82	nnw.	11.6	444	957.3	−4.4	.....	82	3.46	nnw.	11.6	10/10 St., nnw.

December 2, 1918.

A. M.														
10:05	957.0	−5.2	90	sse.	4.5	444	957.0	− 5.2	.....	90	3.55	sse.	4.5	8/10 St.Cu., nw.
						500	950.0	− 5.1	.....	89	3.54	sse.	5.4	
						750	920.1	− 3.8	.....	85	3.77	sw.	9.3	
10:14	956.8	−4.8	90	sse.	4.5	775	917.3	− 3.7	−0.45	85	3.81	sw.	9.7	10/10 A.St., nw.
						1,000	891.4	− 1.2	.....	68	3.76	wsw.	9.8	
10:28	956.4	−4.4	91	se.	4.5	1,174	872.3	0.7	−1.10	55	3.54	w.	9.9	
						1,250	864.0	0.2	.....	55	3.41	w.	.....	
						1,500	837.2	− 1.3	.....	56	3.07	w.	.....	
						1,750	811.2	− 2.9	.....	57	2.74	wnw.	.....	
						2,000	786.0	− 4.5	.....	59	2.47	wnw.	.....	
10:52	955.9	−3.7	91	se.	5.4	2,109	775.1	− 5.2	0.63	59	2.32	wnw.	(*)	
						2,250	761.2	− 6.1	.....	62	2.26	wnw.	.....	
						2,500	737.2	− 7.8	.....	68	2.14	wnw.	.....	
						2,750	713.9	− 9.4	.....	74	2.03	wnw.	.....	
11:07	955.5	−3.2	87	sse.	5.8	2,844	705.2	−10.0	0.65	76	1.98	wnw.	(*)	
						3,000	691.3	−10.4	.....	.....	.....	wnw.	.....	
						3,250	669.5	−11.1	.....	.....	.....	wnw.	.....	
						3,500	648.0	−11.8	.....	.....	.....	nw.	.....	
						3,750	626.8	−12.5	.....	.....	.....	nw.	.....	
11:46	954.2	−1.1	80	s.	7.2	3,870	616.9	−12.8	0.30	(†)	.....	nw.	25.9	3/10 A.St., nw.; 5/10 A.Cu., nw.
						3,750	626.8	−12.4	.....	.....	.....	nw.	25.3	
						3,500	647.6	−11.6	.....	.....	.....	nw.	23.9	
						3,250	668.5	−10.7	.....	.....	.....	nw.	22.6	
						3,000	690.0	− 9.9	.....	.....	.....	nw.	21.3	7/10 A.St., nw.; 3/10 A.Cu., nw.
P. M.														
12:39	952.3	0.4	78	ssw.	6.7	2,831	705.2	− 9.3	0.71	(†)	.....	nw.	20.4	
						2,750	712.5	− 8.7	.....	.....	.....	nw.	20.3	
						2,500	735.7	− 6.9	.....	.....	.....	nw.	20.1	
						2,250	759.4	− 5.2	.....	.....	.....	nw.	19.8	
1:09	951.3	1.6	69	sw.	8.9	2,044	779.6	− 3.7	0.79	(†)	.....	nw.	19.6	
						2,000	783.8	− 3.4	.....	.....	.....	nw.	19.6	
						1,750	808.5	− 1.4	.....	.....	.....	nw.	19.7	
1:30	950.8	2.2	68	sw.	7.2	1,524	831.7	0.4	0.53	(†)	.....	nw.	19.7	
						1,500	833.8	0.5	.....	.....	.....	nw.	19.5	
						1,250	860.5	1.8	.....	.....	.....	nw.	17.3	
						1,000	887.4	3.2	.....	.....	.....	wnw.	15.2	
1:47	950.3	2.7	72	ssw.	6.7	991	888.2	3.2	0.00	(†)	.....	wnw.	15.1	
						750	915.2	3.2	.....	.....	.....	wsw.	11.6	
						500	943.0	3.2	.....	.....	.....	ssw.	8.0	
2:02	949.9	3.2	71	ssw.	7.2	444	949.9	3.2	.....	71	5.46	ssw.	7.2	7/10 A.St., nw.; 2/10 A.Cu., nw.

December 3, 1918 (No. 1).

P. M.														
7:21	958.2	−2.0	79	nw.	9.4	444	958.2	− 2.0	.....	79	4.08	nw.	9.4	Few St.Cu., nnw.
						500	951.5	− 2.3	.....	81	4.08	nw.	10.8	
						750	922.0	− 3.8	.....	92	4.08	n.	16.5	
7:28	958.3	−1.8	79	nw.	9.8	832	912.5	− 4.3	0.59	96	4.09	n.	18.4	Altitude of St.Cu. base about 1,200 m.
						1,000	893.0	− 3.8	.....	85	3.77	n.	19.3	
						1,250	865.5	− 2.9	.....	69	3.79	nnw.	20.7	
7:34	958.5	−1.6	79	nnw.	10.7	1,446	844.5	− 2.3	−0.33	56	2.82	nnw.	21.8	
						1,500	838.7	− 2.7	.....	55	2.68	nnw.	21.1	
						1,750	812.6	− 4.5	.....	53	2.22	nnw.	17.7	10/10 St.Cu., nnw.
7:48	958.8	−0.8	78	nnw.	13.0	1,845	803.0	− 5.2	0.73	52	2.05	nnw.	16.4	
						2,000	787.3	− 6.7	.....	54	1.87	nnw.	17.0	
						2,250	762.9	− 9.0	.....	57	1.62	nnw.	18.0	
8:06	959.2	−0.6	78	nnw.	12.5	2,470	741.4	−11.1	0.94	59	1.39	nnw.	18.8	
						2,250	762.9	− 9.0	.....	56	1.59	nnw.	18.2	
						2,000	788.5	− 6.7	.....	52	1.80	nnw.	17.4	
8:37	959.9	−0.5	80	nnw.	10.7	1,783	810.6	− 4.6	0.53	49	2.03	nnw.	16.8	
						1,750	813.8	− 4.4	.....	50	2.11	nnw.	16.9	
						1,500	839.5	− 3.1	.....	57	2.68	nnw.	17.9	
						1,250	866.7	− 1.8	.....	64	3.37	nnw.	18.9	
8:57	960.3	−0.5	80	nnw.	9.4	1,174	875.8	− 1.4	−0.79	66	3.59	nnw.	19.2	Altitude of St.Cu. base about 1,200 m.
						1,000	895.0	− 2.8	.....	80	3.87	nnw.	16.9	
9:06	960.5	−0.4	81	nnw.	10.3	781	920.6	− 4.5	1.22	98	4.11	nnw.	14.0	
						750	924.5	− 4.1	.....	96	4.16	nnw.	13.6	
						500	954.0	− 1.1	.....	84	4.68	nnw.	10.5	
9:12	960.6	−0.4	81	nnw.	9.8	444	960.6	− 0.4	.....	81	4.79	nnw.	9.8	9/10 St.Cu., nnw.

*Anemometer did not record. †Humidity pen stuck.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 3, 1918 (No. 2).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
1:11	962.4	2.0	68	nw.	6.3	444	962.4	2.0		68	4.80	nw.	6.3	8/10 Cl.St., nw.; 1/10 St.Cu., nw.
						500	955.4	1.5		69	4.70	nw.	6.7	
						750	926.3	− 0.6		73	4.24	nw.	8.3	
						1,000	897.6	− 2.8		78	3.78	nw.	9.9	
1:37	962.3	2.3	66	nw.	5.4	1,023	895.0	− 3.0	0.86	78	3.70	nw.	10.1	
1:44	962.2	2.4	66	nw.	5.8	1,081	888.6	− 1.9	−1.90	69	3.60	nnw.	14.1	
						1,250	869.8	− 2.8		65	3.13	nnw.	14.1	
1:52	962.2	2.5	67	nw.	6.3	1,481	844.7	− 4.1	0.55	60	2.60	nw.	14.1	
						1,500	842.5	− 4.2		59	2.54	nw.	14.2	
						1,750	816.0	− 5.8		53	1.99	nw.	15.4	
						2,000	790.9	− 7.3		46	1.51	nw.	16.6	
						2,250	766.3	− 8.8		39	1.13	nw.	17.7	
2:11	962.2	2.7	65	nw.	5.8	2,343	756.4	− 9.4	0.61	36	0.99	nw.	18.2	
						2,500	741.0	−10.5		35	0.87	nw.	19.1	
						2,750	717.2	−12.3		34	0.72	nw.	20.5	
						3,000	694.2	− 4.0		32	0.58	nw.	21.9	
						3,250	672.0	−15.8		31	0.47	nw.	23.4	5/10 Cl.St., nw.; 3/10 A.St., nw.; 1/10 St.Cu., nw.
2:35	962.5	2.7	65	nw.	6.7	3,433	655.6	−17.1	0.76	30	0.40	nw.	24.4	
						3,250	672.0	−15.6		30	0.47	nw.	24.2	
						3,000	695.2	−13.6		30	0.56	nw.	23.9	
						2,750	718.2	−11.6		29	0.65	nw.	23.6	
						2,500	742.0	− 9.6		29	0.78	nw.	23.4	
3:21	963.0	2.7	65	nw.	4.5	2,351	756.4	− 8.4	0.47	29	0.87	nw.	23.2	
						2,250	766.3	− 7.9		31	0.97	nw.	21.9	
						2,000	791.6	− 6.8		35	1.20	nw.	18.8	
3:33	963.2	2.6	66	nw.	4.5	1,753	816.9	− 5.6	0.71	40	1.52	nw.	15.6	
						1,500	843.7	− 3.8		47	2.09	nw.	16.2	
						1,250	870.8	− 2.0		45	2.33	nw.	16.8	
3:45	963.3	2.5	69	wnw.	4.9	1,244	871.2	− 2.0	−0.61	55	2.84	nw.	16.8	
3:50	963.4	2.4	68	wnw.	5.8	1,032	895.0	− 3.3	0.94	78	3.62	nw.	12.5	
						1,000	898.8	− 3.0		78	3.70	nw.	12.1	
						750	927.5	− 0.7		75	4.32	nw.	8.9	
						500	956.8	1.7		72	4.98	wnw.	5.6	
4:01	963.5	2.2	71	wnw.	4.9	444	963.5	2.2		71	5.08	wnw.	4.9	3/10 Cl.St., nw.; 3/10 A.St., nw.; 2/10 St.Cu., nw.

December 4, 1918.

P. M.														
1:12	963.2	6.3	48	ssw.	5.8	444	963.2	6.3		48	4.58	ssw.	5.8	5/10 Ci.St., nw.; 3/10 A.Cu., nw.
						500	956.3	5.5		50	4.52	ssw.		
1:35	962.7	6.5	46	ssw.	4.5	652	938.4	3.4	1.39	54	4.21	sw.	(*)	9/10 A.Cu., nw.
						750	927.0	3.0		57	4.32	sw.		
						1,000	898.6	2.1		65	4.62	sw.		
						1,250	871.4	1.2		73	4.86	wsw.		
						1,500	844.5	0.3		80	4.99	wsw.		
2:03	962.0	7.5	39	ssw.	5.4	1,547	839.5	0.1	0.37	82	5.04	wsw.	(*)	
						1,750	818.3	−0.8		77	4.40	wsw.		
						2,000	792.9	−1.9		71	3.71	w.		
						2,250	768.4	−2.9		65	3.12	wnw.		
						2,500	744.4	−4.0		59	2.58	wnw.		
						2,750	721.3	−5.1		54	2.15	nw.		
2:18	961.7	8.5	40	ssw.	6.7	2,940	704.1	−5.9	0.43	49	1.82	nw.	18.0	8/10 A.Cu., nw.
						3,000	698.9	−6.3		51	1.83	nw.	18.3	
						3,250	677.0	−8.2		60	1.82	nw.	19.5	
2:23	961.5	8.1	40	ssw.	6.7	3,474	658.0	−9.8	0.77	68	1.80	nw.	20.5	
						3,250	677.2	−8.0		64	1.98	nw.	19.6	
						3,000	700.0	−6.0		58	2.13	nw.	18.5	
						2,750	722.6	−4.0		53	2.32	wnw.	17.5	
						2,500	745.9	−2.0		48	2.48	wnw.	16.5	
3:03	960.8	8.0	47	ssw.	6.7	2,437	751.4	−1.4	0.76	47	2.56	wnw.	16.2	
						2,250	769.5	−0.1		47	2.85	wnw.	16.0	
						2,000	793.3	1.7		47	3.25	w.	15.7	
						1,750	818.3	3.4		47	3.67	wsw.	15.3	
3:20	960.6	7.9	48	sse.	6.7	1,615	831.8	4.8	−0.46	47	4.04	wsw.	15.1	
						1,500	843.8	4.1		40	3.24	sw.	15.2	
						1,250	870.0	3.1		69	5.26	ssw.	15.4	
3:30	960.4	7.9	48	sse.	7.6	1,242	870.7	3.1	0.19	70	5.34	ssw.	15.4	
						1,000	897.0	3.6		63	4.88	ssw.	13.1	
3:35	960.4	7.8	44	sse.	7.6	879	910.6	3.8	0.80	59	4.73	ssw.	11.9	
						750	925.0	4.8		56	4.82	ssw.	10.6	
						500	953.8	6.8		49	4.84	sse.	8.1	
3:45	960.3	7.3	48	sse.	7.6	444	960.3	7.3		48	4.91	sse.	7.6	6/10 A.Cu., nw.

December 5, 1918.

A. M.														
7:40	954.2	5.4	53	nw.	6.7	444	954.2	5.4		53	4.75	nw.	6.7	Cloudless.
						500	948.0	5.4		52	4.66	nw.	9.4	
						750	919.5	5.5		49	4.42	nw.	23.0	
7:48	954.4	4.4	56	nw.	5.8	778	916.1	5.5	−0.03	49	4.42	nw.	24.5	
						1,000	891.7	5.1		47	4.18	nw.	24.9	
7:58	954.7	4.0	57	nw.	5.8	1,028	888.7	5.1	0.18	47	4.13	nw.	24.9	
						1,250	865.0	4.2		46	3.80	nw.	25.4	
						1,500	839.0	3.2		45	3.43	wnw.	26.0	
8:11	955.1	4.0	57	nw.	6.3	1,653	823.1	2.6	0.40	44	3.24	wnw.	26.4	
						1,750	813.7	1.7		44	3.04	wnw.	26.5	
						2,000	788.9	−0.6		43	2.50	wnw.	26.6	
						2,250	764.8	−2.9		42	2.02	wnw.	26.8	
8:27	955.6	3.8	58	nw.	7.2	2,271	762.4	−3.2	0.94	42	1.97	wnw.	25.8	
						2,500	741.0	−4.8		39	1.79	wnw.	23.7	1/10 Cl.St., nw.; 1/10 A.Cu., nw.
						2,750	718.0	−6.6		35	1.22	nw.	20.3	
8:55	956.5	2.3	66	nnw.	6.3	2,782	714.9	−6.8	0.70	35	1.20	nw.	19.8	10/10 St., nw.; kites beaten down by wind.

* Anemometer did not record.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 6, 1918 (No. 1).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
8:23	960.8	−4.8	95	s.	10.7	444	960.8	−4.8	.....	95	3.88	s.	10.7	10/10 St., s.; altitude of St. base about 600 m.
						500	953.7	−5.2	.....	92	3.62	s.	11.7	
8:25	960.8	−4.8	95	s.	10.7	695	930.4	−6.5	0.68	83	2.93	s.	25.3	
						750	924.0	−5.7	.....	81	3.06	s.	24.9	
						1,000	895.5	−2.3	.....	73	3.68	s.	23.2	
						1,250	867.9	1.1	.....	64	4.24	ssw.	21.4	
8:30	960.7	−4.8	95	s.	11.2	1,335	858.2	2.3	−1.21	61	4.40	ssw.	20.8	
						1,250	867.9	1.0	.....	65	4.27	ssw.	19.8	
						1,000	895.5	−2.8	.....	75	3.63	s.	16.8	
8:42	960.3	−4.7	95	s.	12.5	761	922.2	−6.5	0.57	80	3.04	s.	13.8	
						750	924.0	−6.4	.....	80	3.06	s.	13.7	
						500	953.5	−5.0	.....	93	3.73	s.	12.0	
8:44	960.3	−4.7	95	s.	11.6	444	960.3	−4.7	.....	95	3.91	s.	11.6	10/10 St., s.

December 6, 1918 (No. 2).

P. M.														
2:47	953.8	4.9	59	sw.	7.6	444	953.8	4.9	.....	59	5.11	sw.	7.6	8/10 Ci.St., w.
						500	947.3	4.9	.....	57	4.94	sw.	9.5	
2:56	953.7	5.1	59	ssw.	8.9	721	921.9	4.8	0.04	49	4.21	wsw.	16.7	
						750	918.7	5.2	.....	48	4.25	wsw.	17.1	
						1,000	891.1	8.8	.....	37	4.19	w.	20.2	
3:03	953.7	5.2	59	ssw.	8.9	1,177	872.2	11.3	−1.43	29	3.88	wnw.	22.4	
						1,250	864.4	10.8	.....	29	3.76	wnw.	23.0	
						1,500	838.8	9.3	.....	28	3.28	w.	24.8	
3:13	953.6	5.3	59	ssw.	8.9	1,680	820.8	8.1	0.64	27	2.92	w.	26.2	
						1,750	813.6	7.6	.....	27	2.82	w.	26.8	
						2,000	789.3	5.6	.....	27	2.46	w.	29.0	
3:26	953.5	5.5	58	ssw.	8.0	2,210	769.1	4.0	0.77	27	2.20	w.	30.8	
						2,250	765.5	3.7	.....	27	2.15	w.	30.9	
						2,500	741.9	1.6	.....	29	1.99	w.	31.2	
						2,750	719.0	− 0.4	.....	30	1.77	w.	31.5	
						3,000	697.0	− 2.8	.....	32	1.55	w.	31.9	
3:51	953.4	5.1	60	ssw.	7.6	3,201	679.1	− 4.1	0.80	33	1.43	w.	32.1	7/10 Ci.St., w.
						3,000	697.1	− 2.5	.....	32	1.59	w.	31.0	
						2,750	719.0	− 0.6	.....	31	1.80	w.	29.8	
						2,500	741.3	1.3	.....	30	2.01	w.	28.5	
4:33	953.1	3.7	66	sw.	7.2	2,379	752.6	2.3	0.68	29	2.09	w.	27.9	
						2,250	764.5	3.2	.....	29	2.23	w.	27.2	
						2,000	788.4	4.9	.....	29	2.51	w.	25.8	
5:03	953.0	3.0	69	sw.	7.2	1,749	813.1	6.6	0.51	29	2.83	w.	24.4	
						1,500	838.8	7.9	.....	29	3.09	w.	19.8	
						1,250	864.2	9.2	.....	28	3.26	w.	15.2	
5:21	953.0	2.6	72	sw.	8.0	1,066	883.2	10.1	−1.80	28	3.46	w.	11.8	
						1,000	890.5	8.9	.....	31	3.53	w.	12.9	
5:25	953.0	2.8	70	sw.	8.0	933	897.6	7.7	−0.98	34	3.57	w.	14.0	
						750	917.8	5.9	.....	47	4.37	wsw.	11.1	
						500	946.5	3.3	.....	65	5.10	sw.	7.2	
5:31	953.0	2.9	69	sw.	6.3	444	953.0	2.9	.....	69	5.20	sw.	6.3	3/10 Ci.St., w.; 3/10 A.St., w.

December 7, 1918, series (No. 1).

A. M.														
8:00	950.3	−3.6	89	ssw.	4.0	444	950.3	− 3.6	.....	89	4.02	ssw.	4.0	Few A.Cu., ssw.
						500	943.9	− 0.6	.....	79	4.59	ssw.	6.2	
						750	915.5	12.6	.....	29	4.23	w.	16.1	
8:14	950.3	−3.0	87	ssw.	4.0	793	910.6	14.9	−5.30	26	4.40	w.	17.8	
						1,000	888.5	13.0	.....	26	3.89	w.	15.7	
						1,250	862.7	10.6	.....	26	3.32	wsw.	13.2	
8:41	950.3	−3.0	87	sw.	4.9	1,338	853.3	9.8	0.94	26	3.15	wsw.	12.3	
						1,500	837.3	8.4	.....	27	2.98	wsw.	13.9	
						1,750	811.9	6.1	.....	28	2.64	sw.	16.3	
9:04	950.3	−1.7	79	sw.	4.5	1,907	796.2	4.7	0.90	29	2.48	sw.	17.8	
						2,000	785.9	3.9	.....	30	2.42	sw.	17.8	
						2,250	763.2	1.8	.....	32	2.23	sw.	17.9	
						2,500	741.0	− 0.4	.....	34	2.01	sw.	18.0	
9:09	950.3	−1.3	80	sw.	4.5	2,557	734.6	− 0.9	0.86	34	1.93	sw.	18.0	
						2,750	717.0	− 2.7	.....	40	1.95	sw.	19.0	
						3,000	694.6	− 4.9	.....	49	1.98	sw.	20.2	
						3,250	673.0	− 7.2	.....	57	1.89	sw.	21.4	
9:39	950.3	1.5	64	wsw.	4.5	3,365	663.2	− 8.3	0.92	61	1.84	sw.	22.0	
						3,500	651.7	− 9.2	.....	61	1.70	sw.	22.2	
						3,750	631.1	−10.8	.....	62	1.50	sw.	22.6	
						4,000	611.2	−12.4	.....	62	1.30	sw.	23.0	
						4,250	591.6	−14.0	.....	63	1.14	sw.	23.4	Few Ci.St., w.; few A.St., w.
10:00	950.3	3.0	60	sw.	3.6	4,347	584.0	−14.6	0.38	63	1.08	sw.	23.5	
						4,250	591.6	−13.9	.....	65	1.19	sw.	23.5	
						4,000	611.2	−12.2	.....	71	1.51	sw.	23.1	
						3,750	631.2	−10.4	.....	78	1.96	sw.	22.8	
10:41	950.3	6.8	61	sw.	3.1	3,663	639.0	− 9.8	0.99	79	2.09	sw.	22.7	
						3,500	652.5	− 8.2	.....	74	2.25	sw.	22.3	
						3,250	673.8	− 6.2	.....	68	2.46	wsw.	21.7	
						3,000	695.0	− 4.0	.....	62	2.71	wsw.	21.1	
						2,750	717.3	− 1.9	.....	55	2.87	w.	20.6	
11:03	950.3	11.0	37	wsw.	8.0	2,648	727.2	0.2	0.82	49	3.04	w.	20.0	
						2,500	741.6	1.4	.....	47	3.18	w.	20.0	
						2,250	764.0	3.4	.....	44	3.43	wnw.	19.9	
						2,000	787.7	5.5	.....	38	3.43	wnw.	19.9	
11:16	950.2	11.2	44	wsw.	7.2	1,881	793.3	6.5	0.58	35	3.48	wnw.	19.9	
						1,750	812.2	7.3	.....	35	3.58	wnw.	18.5	
						1,500	837.3	8.6	.....	34	3.80	nw.	15.6	
						1,250	863.0	10.2	.....	33	4.11	nw.	12.7	

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 7, 1918, series (No. 1)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:29	950.1	11.7	38	w.	4.9	1,161	872.1	10.7	0.77	32	4.12	nw.	11.7	
						1,000	889.0	11.9	.....	30	4.18	nw.	12.3	
11:39	950.0	12.3	39	w.	7.2	770	913.8	13.7	−0.37	28	4.39	wnw.	15.3	
						750	916.0	13.6	.....	29	4.52	wnw.	14.8	
						500	943.9	12.7	.....	37	5.44	w.	8.2	
11:44	950.0	12.5	39	w.	6.7	444	950.0	12.5	.....	39	5.65	w.	6.7	Few Cl.St., w.
December 7, 1918, series (No. 2).														
12:00 noon	949.9	13.0	32	wnw.	7.2	444	949.9	13.0	.....	32	4.79	wnw.	7.2	Few Cl.St., w.
						500	943.4	13.0	.....	31	4.64	wnw.	9.1	
P. M.														
12:08	949.9	13.2	35	wnw.	7.2	755	915.3	12.8	0.06	25	3.70	nw.	17.6	
						1,000	888.5	11.0	.....	26	3.41	nw.	18.2	
						1,250	862.0	9.3	.....	27	3.16	nw.	18.9	
						1,500	836.5	7.5	.....	28	2.90	wnw.	19.5	
						1,750	811.2	5.7	.....	29	2.66	wnw.	20.2	
12:29	949.9	13.8	37	wnw.	7.2	1,787	807.9	5.4	0.72	29	2.60	wnw.	20.3	
						2,000	786.4	3.5	.....	31	2.43	wnw.	20.2	
						2,250	762.9	1.3	.....	34	2.28	wnw.	20.2	
						2,500	739.6	−0.9	.....	37	2.10	wnw.	20.1	
12:49	949.9	14.4	37	wnw.	7.6	2,561	733.9	−1.4	0.88	38	2.07	wnw.	20.1	
						2,750	716.8	−2.9	.....	39	1.87	wnw.	21.6	
						3,000	694.2	−4.9	.....	41	1.66	w.	23.6	
						3,250	672.0	−6.9	.....	43	1.47	w.	25.6	
1:15	949.9	14.3	37	wnw.	7.2	3,413	657.9	−8.2	0.76	44	1.34	w.	26.9	
						3,250	672.0	−7.0	.....	45	1.52	w.	27.0	
						3,000	693.7	−5.2	.....	47	1.85	wsw.	27.1	Cloudless.
						2,750	715.8	−3.5	.....	48	2.19	wsw.	27.2	
1:57	949.9	14.2	37	wsw.	6.7	2,630	726.4	−2.6	0.76	49	2.41	wsw.	27.3	
						2,500	738.5	−1.6	.....	48	2.57	wsw.	25.9	
						2,250	762.0	0.3	.....	46	2.87	wsw.	23.2	
						2,000	786.4	2.2	.....	45	3.22	wsw.	20.5	
2:44	950.2	13.7	30	w.	6.7	1,750	811.2	4.0	.....	43	3.50	wsw.	17.8	
						1,584	827.9	5.3	0.57	42	3.74	wsw.	16.0	
						1,500	836.5	5.8	.....	42	3.87	wsw.	15.5	
						1,250	862.0	7.2	.....	41	4.17	w.	14.0	
3:05	950.3	13.5	29	w.	7.2	1,000	888.5	8.7	.....	40	4.50	wnw.	12.5	
						847	905.5	9.5	0.92	39	4.63	wnw.	11.6	
						750	916.0	10.4	.....	37	4.67	wnw.	10.5	
						500	944.0	12.7	.....	31	4.55	wnw.	7.8	
3:14	950.4	13.2	30	wnw.	7.2	444	950.4	13.2	.....	30	4.55	wnw.	7.2	Cloudless.
December 7, 1918, series (No. 3).														
P. M.														
3:43	950.5	12.4	34	wnw.	5.4	444	950.5	12.4	.....	34	4.90	wnw.	5.4	Cloudless.
						500	944.2	11.7	.....	35	4.81	wnw.	6.9	
						750	916.0	8.6	.....	41	4.58	wnw.	13.4	
3:53	950.6	12.2	33	wnw.	5.4	911	898.4	6.6	1.24	45	4.39	wnw.	17.6	
						1,000	888.7	6.0	.....	45	4.21	wnw.	18.1	
						1,250	861.7	4.3	.....	45	3.74	wnw.	19.5	
						1,500	835.7	2.7	.....	46	3.41	w.	20.9	
4:04	950.6	11.8	34	wnw.	5.8	1,689	816.4	1.4	0.67	46	3.11	w.	22.0	
						1,750	810.0	1.2	.....	45	3.00	w.	22.7	
						2,000	785.0	0.5	.....	43	2.72	w.	24.5	
						2,250	761.0	− 0.3	.....	41	2.44	w.	26.6	
4:18	950.7	11.1	35	wnw.	4.9	2,375	749.6	− 0.7	0.31	40	2.30	w.	27.5	
						2,500	737.7	− 1.0	.....	39	2.19	w.	27.0	
						2,750	714.9	− 1.6	.....	37	1.98	w.	26.0	
						3,000	693.0	− 2.2	.....	35	1.78	w.	25.0	
4:47	950.9	8.5	46	wnw.	4.9	3,200	675.8	− 2.6	0.22	33	1.62	w.	24.2	
						3,000	693.0	− 2.4	.....	35	1.75	w.	23.8	
						2,750	715.3	− 1.7	.....	37	1.96	w.	23.2	
						2,500	738.4	− 1.2	.....	40	2.21	w.	22.7	
5:10	951.2	5.4	51	wsw.	4.9	2,403	739.1	− 1.2	0.35	40	2.21	w.	22.7	
						2,250	762.0	− 0.4	.....	41	2.42	w.	21.3	
						2,000	785.8	0.6	.....	41	2.62	wnw.	19.7	
						1,750	810.7	1.5	.....	42	2.86	wnw.	18.2	
5:32	951.5	5.0	56	wsw.	5.4	1,604	825.7	1.9	1.01	42	2.94	wnw.	17.6	
						1,500	836.2	2.9	.....	42	3.16	wnw.	16.9	
						1,250	862.2	5.5	.....	42	3.79	wnw.	14.1	
						1,000	889.3	8.0	.....	42	4.51	wnw.	13.7	
5:51	951.8	4.8	51	wsw.	5.8	932	896.8	8.7	−0.98	42	4.72	wnw.	13.3	
						750	917.1	6.9	.....	48	4.78	w.	10.0	
						500	945.7	4.4	.....	55	4.60	wsw.	5.3	
6:01	952.0	3.9	57	wsw.	4.5	444	952.0	3.9	.....	57	4.61	wsw.	4.5	Cloudless.
December 7, 1918, series (No. 4).														
P. M.														
6:17	952.3	3.4	58	wsw.	5.4	444	952.3	3.4	.....	58	4.52	wsw.	5.4	Cloudless.
						500	945.8	4.3	.....	56	4.65	wsw.	7.2	
						750	917.4	8.2	.....	46	5.00	w.	14.7	
6:25	952.4	3.2	56	wsw.	5.8	773	914.9	8.6	−1.58	45	5.03	w.	15.7	Aurora observed from 6:10 p. m. to end of flight.
						1,000	889.7	6.6	.....	45	4.39	w.	16.0	
						1,250	863.5	4.4	.....	46	3.85	wnw.	16.4	
6:42	952.7	4.1	57	wsw.	6.3	1,500	837.0	2.1	0.89	47	3.34	wnw.	16.8	
						1,750	812.0	0.2	.....	46	2.86	w.	17.2	

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 7, 1918, series (No. 4)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m.p.s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m.p.s.*	
6:58	953.0	4.2	53	wsw.		1,901	796.9	− 0.9	0.75	46	2.61	w.	17.8	
						2,000	787.0	− 0.7		45	2.59	w.	18.6	
						2,250	762.8	− 0.3		43	2.56	w.	20.7	
						2,500	739.0	0.1		41	2.52	w.	22.8	
7:18	953.1	2.9	58	wsw.	5.8	2,571	730.7	0.2	−0.16	40	2.48	w.	23.6	
						2,750	716.2	− 0.7		39	2.25	w.	22.8	
						3,000	693.7	− 2.1		38	1.95	w.	21.5	
						3,250	672.3	− 3.5		36	1.64	w.	20.2	
8:0	953.3	3.1	58	wsw.	5.4	3,426	657.8	− 4.5	0.54	35	1.47	w.	19.3	
						3,250	672.3	− 3.6		35	1.58	w.	19.3	
						3,000	693.7	− 2.3		35	1.76	w.	19.3	
						2,750	716.2	− 1.1		35	1.95	w.	19.3	
8:27	953.5	2.7	59	w.	4.5	2,677	723.2	− 0.7	0.00	35	2.02	w.	19.3	
						2,500	739.0	− 0.7		37	2.13	w.	17.7	
						2,250	762.8	− 0.7		39	2.25	w.	15.5	
8:42	953.6	2.2	58	w.	4.5	2,195	768.1	− 0.7	0.41	40	2.30	w.	15.0	
						2,000	787.0	− 0.2		40	2.40	w.	14.7	
						1,750	812.0	1.2		39	2.60	wnw.	14.2	
9:04	953.7	2.2	60	w.	5.4	1,507	837.0	2.1	0.75	39	2.77	wnw.	13.9	
						1,500	837.4	2.6		40	2.95	wnw.	14.1	
						1,250	863.5	4.0		41	3.33	wnw.	14.8	
						1,000	890.7	5.9		42	3.99	wnw.	15.7	
9:21	953.8	1.0	62	w.	5.4	884	903.5	6.8	−1.32	43	4.25	wnw.	16.1	
						750	918.5	5.0		49	4.27	wnw.	13.1	
						500	947.2	1.7		60	4.15	w.	7.5	
9:30	953.9	1.0	62	w.	6.3	444	953.9	1.0		62	4.07	w.	6.3	Cloudless.

December 7-8, 1918, series (No. 5).

P. M.														
9:55	954.0	1.4	63	w.	7.2	444	954.0	1.4		63	4.26	w.	7.2	Cloudless.
						500	947.5	2.4		59	4.28	w.	8.4	
10:00	954.0	2.5	56	wnw.	7.2	734	920.6	6.8	−1.86	40	3.95	nw.	13.6	Aurora continued to next flight.
						750	918.7	6.7		40	3.92	nw.	13.5	
						1,000	891.0	5.8		36	3.32	nw.	12.8	
						1,250	864.5	4.8		33	2.84	nw.	12.0	
10:23	954.0	3.2	56	nw.	7.6	1,393	849.3	4.2	0.39	31	2.56	nw.	11.5	
						1,500	838.1	3.8		31	2.49	nw.	12.7	
						1,750	812.0	2.8		30	2.24	nw.	8.8	
10:51	954.0	0.0	69	nw.	6.3	1,793	807.5	2.6	0.40	30	2.21	nw.	8.4	
						2,000	786.3	1.7		30	2.07	nw.	9.6	
						2,250	761.8	0.5		30	1.91	nw.	11.0	
						2,500	738.6	−0.5		29	1.70	nw.	12.5	
						2,750	716.5	−1.5		29	1.56	nw.	13.9	
11:20	954.2	−0.2	69	nw.	8.9	3,000	694.5	−2.6		29	1.43	nw.	15.3	
						3,008	693.9	−2.6	0.42	29	1.43	nw.	15.3	
						3,000	694.5	−2.6		29	1.43	nw.	15.2	
						2,750	716.7	−1.5		29	1.56	nw.	13.6	
						2,500	739.4	−0.5		29	1.70	nw.	11.9	
						2,250	762.8	0.5		29	1.84	nw.	10.2	
						2,000	786.8	1.5		29	1.97	nw.	8.6	
11:48	954.6	−0.7	70	nw.	6.3	1,841	803.0	2.2	0.28	29	2.08	nw.	7.5	
						1,750	812.0	2.5		29	2.12	nw.	7.6	
						1,500	838.1	3.1		29	2.21	nw.	7.8	
A. M.														
12:03	954.7	0.2	64	wnw.	6.7	1,481	840.0	3.2	0.42	29	2.23	nw.	7.8	
						1,250	864.5	4.2		30	2.48	nw.	8.9	
						1,000	891.0	5.2		31	2.74	nw.	10.0	
12:18	954.9	1.2	69	wnw.	6.7	879	904.9	5.7	−1.31	32	2.93	nw.	10.6	
						750	919.1	4.0		41	3.33	nw.	9.1	
						500	948.5	0.7		60	3.83	wnw.	6.1	
12:25	955.0	0.0	64	wnw.	5.4	444	955.0	0.0		64	3.91	wnw.	5.4	Cloudless.

December 8, 1918, series (No. 6).

A. M.														
12:49	954.5	1.0	66	w.	7.2	444	954.5	1.0		66	4.34	w.	7.2	Cloudless.
						500	947.8	2.1		62	4.41	w.	7.8	
12:57	954.4	1.0	66	w.	6.7	744	919.8	6.7	−1.80	44	4.32	nw.	10.4	Aurora during entire flight.
						750	919.4	6.7		44	4.32	nw.	10.4	
						1,000	891.8	5.8		41	3.78	nw.	10.4	
						1,250	865.4	4.9		37	3.20	nw.	10.5	
2:09	956.1	1.2	62	w.	7.2	1,482	841.7	4.1	0.35	34	2.78	nw.	10.5	
						1,500	839.7	4.0		34	2.76	nw.	10.5	
						1,750	814.5	3.0		34	2.58	nw.	10.9	
						2,000	789.9	2.0		33	2.33	nw.	11.3	
2:38	956.4	1.0	62	w.	7.2	2,160	774.2	1.3	0.42	33	2.21	nw.	11.5	
						2,000	789.9	2.0		33	2.33	nw.	11.0	
						1,750	814.5	3.1		32	2.44	nw.	10.1	
						1,500	840.3	4.1		32	2.62	nw.	9.3	
3:00	956.7	1.2	66	w.	7.2	1,367	854.2	4.7	0.36	32	2.73	nw.	8.9	
						1,250	866.4	5.1		33	2.90	nw.	8.4	
						1,000	893.1	6.0		35	3.27	nw.	7.5	
3:08	956.7	1.3	66	wnw.	6.7	807	914.9	6.7	−1.43	36	3.53	nw.	6.7	
						750	921.3	5.9		40	3.72	nw.	6.7	
						500	950.0	2.3		59	4.25	wnw.	6.7	
3:17	956.7	1.5	63	wnw.	6.7	444	956.7	1.5		63	4.29	wnw.	6.7	Cloudless.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 8, 1918, series (No. 7).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
3:48	956.7	1.4	63	wnw.	7.6	444	956.7	1.4	.....	63	4.26	wnw.	7.6	Cloudless.
						500	950.5	2.0	.....	60	4.24	wnw.	7.1	
						750	922.0	4.9	.....	46	3.98	nnw.	5.0	Aurora observed during entire flight.
5:20	957.3	3.2	78	w.	4.5	834	912.6	5.9	−1.48	41	3.81	n.	4.0	
						750	922.4	4.4	.....	47	3.93	n.	4.2	
						500	951.7	−0.1	.....	65	3.94	nw.	4.8	
6:12	957.8	−1.1	69	nw.	4.9	444	957.8	−1.1	.....	69	3.84	nw.	4.9	Cloudless.

December 8, 1918, series (No. 8).

P. M.														
5:35	959.6	0.8	72	ene.	7.2	444	959.6	0.8	.....	72	4.66	ene.	7.2	1/10 A.St., se.
						500	953.0	1.7	.....	67	4.63	ene.	8.1	
						750	924.0	6.0	.....	45	4.21	ene.	12.4	
5:38	959.5	0.7	72	ene.	8.9	762	922.7	6.2	−1.70	44	4.17	e.	12.6	
						1,000	895.7	5.0	.....	42	3.66	e.	11.7	
						1,250	858.0	3.6	.....	39	3.08	e.	10.7	
						1,500	841.9	2.4	.....	36	2.61	e.	9.7	
6:00	959.4	0.5	73	ene.	6.7	1,738	817.9	1.1	0.52	34	2.25	e.	8.8	
						1,750	816.0	1.1	.....	34	2.25	e.	8.8	
						2,000	791.4	0.4	.....	33	2.08	e.	8.3	
						2,250	767.1	−0.2	.....	32	1.92	e.	7.9	
						2,500	743.6	−0.8	.....	31	1.77	e.	7.4	
6:23	959.3	0.2	75	ene.	6.7	2,625	731.7	−1.1	0.33	31	1.73	e.	7.2	
						2,500	743.6	−0.6	.....	31	1.80	e.	8.2	
						2,250	767.1	0.4	.....	32	2.01	e.	10.2	
						2,000	791.4	1.5	.....	32	2.18	e.	12.3	
6:41	959.2	−0.4	77	ene.	6.7	1,776	813.3	2.4	0.34	33	2.40	e.	14.1	4/10 A.Cu., se.
						1,750	816.0	2.5	.....	33	2.41	e.	13.9	
						1,500	841.9	3.3	.....	33	2.55	e.	12.3	
6:48	959.2	−0.3	77	ene.	6.7	1,280	864.7	4.1	−0.54	33	2.70	e.	10.8	
						1,250	868.0	3.9	.....	35	2.83	e.	10.7	
						1,000	895.7	2.6	.....	48	3.54	e.	9.4	
						750	924.0	1.2	.....	61	4.06	ene.	8.2	
						500	953.0	−0.1	.....	74	4.48	ene.	7.0	
7:05	959.1	−0.4	77	ene.	6.7	444	959.1	−0.4	.....	77	4.55	ene.	6.7	8/10 A.Cu., se.

December 9, 1918.

A. M.														
7:28	955.0	−1.5	80	ne.	9.8	444	955.0	−1.5	.....	80	4.31	ne.	9.8	10/10 St.Cu., ne.
						500	948.5	−1.8	.....	80	4.21	ne.	11.3	
						750	919.0	−3.1	.....	80	3.77	ene.	18.0	
7:36	955.0	−1.5	80	ne.	9.8	764	917.2	−3.2	0.53	80	3.74	ene.	18.4	
						1,000	890.4	−0.8	.....	76	4.34	e.	18.9	
7:42	955.0	−1.6	79	ne.	9.8	1,164	872.2	−0.9	−1.02	74	4.82	e.	19.3	
						1,250	862.6	0.4	.....	72	4.53	e.	19.5	
						1,500	836.0	−1.0	.....	67	3.77	e.	19.9	
						1,750	810.5	−2.5	.....	62	3.08	e.	20.3	
8:02	955.0	−1.8	79	ne.	9.8	1,891	796.2	−3.3	0.58	59	2.74	e.	20.6	Altitude of St.Cu. base about 2,350 m.
						2,000	785.2	−3.9	.....	63	2.78	e.	20.8	
						2,250	760.7	−5.2	.....	73	2.88	ene.	21.3	
						2,500	736.7	−6.6	.....	83	2.90	ene.	21.9	
8:12	954.9	−1.9	79	ne.	9.8	2,522	734.6	−6.7	0.54	84	2.91	ene.	21.9	Light snow began 8:20 a. m., changed to moist snow and sleet at 9:35 and ended at 10:00 a. m.
						2,750	713.3	−7.5	.....	86	2.78	ene.	22.2	
						3,000	690.9	−8.4	.....	87	2.60	ne.	22.6	
8:27	954.9	−2.0	79	ne.	10.7	3,218	671.7	−9.2	0.46	89	2.48	ne.	22.9	
						3,000	690.9	−8.0	.....	90	2.79	ne.	23.3	
						2,750	713.3	−6.6	.....	91	3.18	ne.	23.8	
8:46	954.8	−1.9	79	ne.	12.5	2,632	724.2	−5.9	0.24	92	3.41	ne.	24.0	
						2,500	736.7	−5.6	.....	92	3.51	ne.	24.0	
						2,250	760.7	−5.0	.....	92	3.69	ne.	24.1	
						2,000	785.2	−4.4	.....	92	3.88	ne.	24.1	10/10 St., ne.
9:08	954.6	−1.9	81	ne.	13.4	1,871	797.8	−4.1	0.60	92	3.98	ne.	24.1	
						1,750	810.5	−3.4	.....	92	4.23	ne.	24.0	Altitude of St. base about 1,500 m.
						1,500	835.0	−1.9	.....	90	4.70	ne.	23.8	
9:25	954.5	−2.0	83	ne.	13.4	1,423	844.0	−1.4	0.07	90	4.90	ne.	23.7	
						1,250	832.6	−1.3	.....	91	4.99	ne.	23.5	
						1,000	889.6	−1.1	.....	92	5.12	ene.	23.1	
9:42	954.4	−2.3	85	ne.	13.4	887	902.6	−1.0	−0.32	92	5.17	ene.	23.0	
						750	918.2	−1.4	.....	90	4.90	ene.	20.0	
						500	947.7	−2.2	.....	88	4.48	ne.	14.6	
9:56	954.3	−2.4	87	ne.	13.4	444	954.3	−2.4	.....	87	4.35	ne.	13.4	10/10 St., ne.

December 10, 1918.

A. M.														
8:02	956.7	−3.0	91	nw.	3.1	444	956.7	− 3.0	.....	91	4.32	nw.	3.1	10/10 St., nw.
						500	950.0	− 3.5	.....	92	4.20	nw.	3.8	Light snow from beginning of flight to 8:20 a. m.
8:17	956.8	−2.6	91	nw.	3.1	711	924.9	− 5.3	0.86	94	3.68	nw.	6.5	Clouds lifting.
						750	920.5	− 5.3	.....	94	3.68	nw.	7.0	
						1,000	891.8	− 5.4	.....	91	3.53	nw.	9.9	
8:39	957.0	−2.6	91	nw.	3.1	1,134	876.6	− 5.5	0.05	90	3.46	nw.	11.5	9/10 A.St., nw.
						1,250	864.1	− 5.8	.....	90	3.38	nw.	11.8	
						1,500	836.5	− 6.4	.....	91	3.24	nw.	12.5	
						1,750	810.3	− 7.0	.....	92	3.11	nw.	13.2	
						2,000	784.9	− 7.6	.....	93	2.99	nw.	13.9	

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 10, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:07	957.1	−2.6	91	nw.	2.2	2,128	771.9	− 7.9	0.24	93	2.90	nw.	14.3	
						2,250	759.9	− 8.5	.....	93	2.75	nw.	(*)	
						2,500	735.5	− 9.9	.....	93	2.44	nw.	(*)	
						2,750	712.2	−11.2	.....	93	2.17	nw.	(*)	
						3,000	689.5	−12.5	.....	93	1.93	nw.	(*)	Altitude of A.St. base about 2,900 m.
10:00	956.7	−2.4	91	wnw.	2.7	3,114	678.9	−13.1	0.53	93	1.82	nw.	(*)	
						3,250	667.3	−13.8	.....	89	1.64	nw.	(*)	
						3,500	646.2	−15.0	.....	82	1.35	nw.	(*)	
						3,750	625.3	−16.3	.....	75	1.10	wnw.	(*)	Clouds lowering. 10/10 St., nw.
						4,000	605.1	−17.5	.....	68	0.88	wnw.	(*)	
11:30	956.4	−1.2	88	w.	4.5	4,221	586.9	−18.6	0.62	62	0.73	wnw.	12.7	
						4,000	605.3	−17.0	.....	66	0.90	wnw.	13.4	
						3,750	626.3	−15.1	.....	71	1.16	wnw.	14.1	
						3,500	647.8	−13.2	.....	76	1.48	nw.	14.8	
						3,250	669.3	−11.4	.....	80	1.83	nw.	15.6	
P. M.														
12:46	956.4	1.5	72	wnw.	4.5	3,172	676.1	−10.8	0.54	82	1.98	nw.	15.8	3/10 A.St., nw.
						3,000	691.4	− 9.9	.....	77	2.02	nw.	14.8	
						2,750	714.0	− 8.5	.....	64	1.89	nw.	13.4	
						2,500	737.2	− 7.2	.....	54	1.79	nw.	12.0	
						2,250	760.3	− 5.9	.....	43	1.60	nw.	10.6	
1:10	956.3	0.8	82	wnw.	4.5	2,016	783.9	− 4.6	−0.03	33	1.37	nw.	9.2	
						2,000	785.9	− 4.6	.....	34	1.41	nw.	9.4	
						1,750	811.4	− 4.7	.....	58	2.39	nw.	12.0	
						1,500	837.5	− 4.8	.....	81	3.30	nw.	14.7	
1:30	956.2	0.7	82	wnw.	4.5	1,438	843.7	− 4.8	0.41	87	3.55	nw.	15.4	
						1,250	863.9	− 4.0	.....	86	3.76	nw.	15.2	
						1,000	891.8	− 3.0	.....	84	3.99	wnw.	11.7	
1:46	956.1	0.7	82	wnw.	4.9	950	897.3	− 2.8	0.65	84	4.07	wnw.	11.3	
						750	920.5	− 1.5	.....	84	4.53	wnw.	8.8	
						500	949.4	0.1	.....	84	5.17	wnw.	5.6	
1:57	956.0	0.5	84	wnw.	4.9	444	956.0	0.5	.....	84	5.32	wnw.	4.9	5/10 St.Cu., nw.

December 11, 1918.

A. M.														
7:27	961.1	−10.0	80	nw.	4.9	444	961.1	−10.0	.....	80	2.08	nw.	4.9	2/10 A.St., nw.; 6/10 St. Cu., nw.
						500	954.2	−10.0	.....	81	2.11	nw.	7.0	
						750	924.0	−10.2	.....	88	2.24	nw.	15.9	
7:37	961.1	− 9.4	81	nw.	5.8	839	913.1	−10.2	0.05	90	2.30	nw.	19.5	9/10 St.Cu., nw.
						1,000	894.6	−10.9	.....	91	2.17	nw.	19.7	
						1,250	865.8	−12.0	.....	95	2.06	nw.	20.0	
7:49	961.1	− 9.0	81	nw.	4.5	1,404	848.2	−12.7	0.44	95	1.94	nw.	20.2	
						1,500	838.0	−10.3	.....	80	2.02	nw.	18.1	Altitude of St.Cu. base about 1,500 m.
7:56	961.1	− 8.5	82	nw.	3.1	1,532	834.2	− 9.5	−2.50	75	2.03	nw.	17.4	
						1,750	810.8	− 9.8	.....	61	1.61	nw.	17.7	
						2,000	785.0	−10.2	.....	46	1.17	nw.	18.0	
8:11	961.1	−10.2	87	w.	2.2	2,158	768.8	−10.4	0.14	36	0.90	nw.	18.2	
						2,250	760.0	−11.0	.....	39	0.92	nw.	18.2	
						2,500	735.4	−12.5	.....	47	0.97	nw.	18.0	
						2,750	712.0	−14.0	.....	55	1.00	nw.	17.9	
8:24	961.1	−11.0	86	wsw.	1.8	2,915	696.2	−15.0	0.61	60	0.99	nw.	17.8	
						3,000	689.0	−15.4	.....	61	0.97	nw.	17.9	
						3,250	666.9	−16.7	.....	64	0.90	nw.	18.3	
						3,500	645.0	−18.0	.....	67	0.83	nw.	18.8	
						3,750	624.0	−19.2	.....	71	0.79	nw.	19.2	
						4,000	602.7	−20.5	.....	74	0.73	nw.	19.6	
8:50	961.1	−10.0	87	ssw.	3.1	4,019	600.7	−20.6	0.60	74	0.72	nw.	19.6	
						4,000	602.7	−20.4	.....	74	0.73	nw.	19.6	
						3,750	624.0	−18.3	.....	71	0.86	nw.	19.3	
						3,500	645.0	−16.1	.....	68	1.01	nw.	19.1	
9:28	961.1	− 6.6	89	wsw.	5.4	3,377	656.0	−15.0	0.38	66	1.09	nw.	19.0	
						3,250	667.3	−14.5	.....	68	1.18	nw.	19.0	
						3,000	690.0	−13.6	.....	72	1.35	nw.	19.0	
9:54	961.1	− 5.7	87	wsw.	4.5	2,753	712.4	−12.6	0.45	76	1.56	nw.	19.0	
						2,500	736.4	−11.5	.....	66	1.50	nw.	17.5	
						2,250	761.0	−10.3	.....	56	1.42	nw.	15.1	
						2,000	785.9	− 9.1	.....	44	1.24	nw.	14.5	
10:12	961.0	− 4.7	86	wsw.	4.9	1,843	802.0	− 8.5	−2.17	39	1.15	nw.	13.7	
						1,750	811.2	−10.5	.....	54	1.34	nw.	14.3	
10:17	961.0	− 4.2	86	wsw.	5.4	1,626	835.0	−13.2	0.77	75	1.46	wnw.	15.0	
						1,500	838.0	−12.2	.....	77	1.64	wnw.	14.6	
						1,250	865.8	−10.3	.....	91	2.05	wnw.	13.9	
						1,000	894.6	− 8.4	.....	85	2.54	wnw.	13.2	
10:32	960.9	− 3.9	82	wsw.	5.4	899	906.6	− 7.6	0.90	87	2.79	wnw.	12.9	
						750	924.0	− 6.3	.....	85	3.05	w.	10.4	
						500	954.2	− 4.0	.....	83	3.63	wsw.	6.3	
10:47	960.9	− 3.5	82	wsw.	5.4	444	960.9	− 3.5	.....	82	3.74	wsw.	5.4	10/10 St.Cu., nw.

December 12, 1918.

A. M.														
8:30	960.6	−17.9	88	nnw.	2.2	444	960.6	−17.9	.....	88	1.11	nnw.	2.2	
						500	953.5	−15.2	.....	81	1.31	e.	3.2	
8:46	960.5	−17.3	88	nnw.	1.8	754	922.6	− 2.8	−4.87	51	2.47	se.	7.5	Few A.Cu., sw.
9:21	960.3	−14.0	87	n.	1.3	992	895.2	− 1.9	−0.38	41	2.14	sse.	5.6	
						1,000	894.4	− 1.9	.....	41	2.14	sse.	5.6	
						1,250	866.7	− 2.4	.....	39	1.95	s.	6.3	
						1,500	839.8	− 3.1	.....	35	1.65	s.	7.2	
						1,750	813.9	− 3.4	.....	34	1.56	sse.	7.7	

* Ice on anemometer.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 12, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
9:40	960.2	−13.3	88	n.	1.3	1,938	794.5	− 3.8	0.17	32	1.42	ssw.	8.2	
						1,750	813.9	− 3.5	.....	35	1.60	s.	7.7	
						1,500	839.8	− 3.2	.....	40	1.87	s.	7.9	
						1,250	866.7	− 2.8	.....	45	2.18	sse.	6.3	
10:01	960.1	−12.9	84	nne.	0.9	1,234	868.4	− 2.8	0.49	45	2.18	sse.	6.3	
						1,000	894.4	− 1.6	.....	46	2.46	se.	7.4	
10:17	960.1	− 9.7	80	n.	0.9	868	909.6	− 1.0	−2.08	47	2.64	se.	8.0	
						750	923.2	− 3.4	.....	56	2.58	e.	6.0	
						500	953.4	− 8.6	.....	76	2.23	nne.	1.8	
10:27	960.1	− 9.8	80	n.	0.9	444	960.1	− 9.8	.....	80	2.11	n.	0.9	4/10 Ci.St., sw.

December 13, 1918.

A. M.														
7:51	960.0	−15.0	86	ssw.	5.8	444	960.0	−15.0	.....	86	1.42	ssw.	5.8	Cloudless.
						500	952.8	−12.6	.....	78	1.60	ssw.	6.1	
						750	922.0	− 1.7	.....	42	2.23	wsw.	7.2	2/10 A.St., wsw.; 2/10 A.Cu., wsw.
9:16	959.5	−12.7	86	ssw.	4.9	809	915.7	0.9	−4.36	34	2.22	wsw.	7.5	1/10 Ci.Cu., wsw.
						1,000	893.2	− 0.2	.....	35	2.10	wsw.	8.3	
						1,250	865.8	− 1.6	.....	36	1.93	w.	9.3	Mirage from 8:00 to 9:45 a. m.
						1,500	839.5	− 3.0	.....	36	1.71	w.	10.3	
9:29	959.6	−11.9	85	ssw.	4.5	1,645	824.7	− 3.8	0.36	37	1.64	w.	10.9	
						1,750	813.9	− 4.4	.....	41	1.73	w.	11.4	
						2,000	788.8	− 5.9	.....	51	1.89	w.	12.5	
						2,250	764.6	− 7.4	.....	61	1.99	wnw.	13.7	
						2,500	740.6	− 8.9	.....	71	2.03	wnw.	14.8	
10:08	959.7	−10.0	87	ssw.	4.0	2,559	734.4	− 9.3	0.60	73	2.01	wnw.	15.1	
						2,750	717.0	−10.7	.....	73	1.78	wnw.	15.9	
						3,000	693.6	−12.5	.....	72	1.49	wnw.	17.0	
						3,250	671.3	−14.3	.....	72	1.27	w.	18.0	
						3,500	649.5	−16.2	.....	71	1.05	w.	19.1	
10:20	959.4	− 9.4	84	ssw.	4.5	3,641	637.0	−17.2	0.73	71	0.95	w.	19.7	
						3,750	628.2	−17.8	.....	69	0.88	w.	19.7	
						4,000	607.3	−19.2	.....	64	0.71	w.	19.6	
						4,250	585.8	−20.6	.....	59	0.57	wsw.	19.6	
						4,500	567.3	−22.0	.....	55	0.46	wsw.	19.5	
10:50	958.9	− 8.6	85	ssw.	4.9	4,699	553.2	−23.0	0.55	51	0.39	wsw.	19.5	
						4,750	547.5	−22.7	.....	47	0.37	wsw.	18.7	
11:10	958.5	− 7.6	84	ssw.	5.4	4,849	540.1	−22.3	−0.23	41	0.34	wsw.	17.4	
11:32	958.2	− 5.5	82	s.	4.0	4,774	545.3	−22.4	0.55	35	0.28	wsw.	17.4	Few Ci.Cu., wsw.
						4,750	547.5	−22.3	.....	35	0.29	wsw.	17.4	
						4,500	566.8	−21.9	.....	39	0.37	wsw.	17.4	
						4,250	586.5	−19.5	.....	44	0.48	wsw.	17.4	
						4,000	606.5	−18.2	.....	48	0.59	wsw.	17.3	
						3,750	627.0	−16.8	.....	52	0.72	wsw.	17.3	
						3,500	648.2	−15.5	.....	56	0.88	wsw.	17.3	
P. M.														
12:15	957.5	− 2.5	74	s.	6.3	3,491	649.3	−15.4	0.73	53	0.89	wsw.	17.3	
						3,250	670.0	−13.6	.....	58	1.09	wsw.	16.4	
						3,000	692.1	−11.8	.....	60	1.33	wsw.	15.4	
						2,750	715.1	−10.0	.....	61	1.59	wsw.	14.5	
						2,500	738.8	− 8.2	.....	63	1.92	wsw.	13.5	
12:51	957.2	− 1.5	74	ssw.	7.6	2,391	749.3	− 7.4	0.76	64	2.09	wsw.	13.1	
						2,250	762.8	− 6.3	.....	61	2.19	wsw.	13.1	
						2,000	787.3	− 4.4	.....	56	2.36	sw.	13.2	
						1,750	812.9	− 2.5	.....	52	2.58	sw.	13.2	
1:07	957.1	− 1.1	72	sw.	6.3	1,670	821.6	− 1.9	0.61	50	2.61	sw.	13.2	
						1,500	838.8	− 0.9	.....	47	2.66	sw.	12.8	
						1,250	865.0	0.7	.....	44	2.83	sw.	12.2	
						1,000	892.5	2.2	.....	40	2.86	sw.	11.7	
1:27	957.1	− 0.5	72	sw.	5.4	758	920.5	3.7	−1.27	36	2.87	sw.	11.1	
						750	921.3	3.6	.....	37	2.93	sw.	11.0	
						500	950.7	0.4	.....	66	4.15	sw.	6.4	
1:32	957.1	− 0.3	72	sw.	5.4	444	957.1	− 0.3	.....	72	4.29	sw.	5.4	7/10 A.Cu., wnw.

December 16, 1918 (No. 1).

A. M.														
8:17	975.3	−8.9	91	nne.	5.8	444	975.3	−8.9	.....	91	2.60	nne.	5.8	10/10 St., nne.
						500	968.2	−8.9	.....	94	2.69	ne.	5.8	
8:23	975.4	−8.9	91	nne.	6.3	610	954.7	−8.9	0.00	99	2.83	ene.	5.7	Altitude of St. base about 650 m.
						750	937.8	−6.7	.....	99	3.44	ene.	(*)	
9:00	976.0	−9.0	91	nne.	5.8	957	913.8	−3.5	−1.60	98	4.47	ene.	(*)	
						750	938.8	−6.9	.....	95	3.24	ne.	(*)	
9:07	976.1	−9.2	91	nne.	6.3	683	946.5	−8.0	−0.50	94	2.91	ne.	(*)	
						500	969.2	−8.9	.....	92	2.63	nne.	(*)	
9:11	976.1	−9.2	91	nne.	6.3	444	976.1	−9.2	.....	91	2.54	nne.	6.3	10/10 St., nne.

December 16, 1918 (No. 2).

P. M.														
1:52	976.0	−7.4	92	nnw.	10.3	444	976.0	−7.4	.....	92	3.00	nnw.	10.3	10/10 A.St., e.
						500	968.8	−7.0	.....	91	3.08	n.	(†)	
						750	938.0	−5.4	.....	88	3.41	ne.	(†)	
2:07	976.0	−7.5	92	nnw.	10.3	756	937.8	−5.4	−0.64	88	3.41	ne.	(†)	
						1,000	908.9	−3.9	.....	97	4.28	ene.	(†)	
2:50	976.0	−7.4	92	nnw.	8.9	1,075	900.6	−3.5	−0.60	100	4.55	ene.	(†)	
						1,250	880.8	−3.2	.....	98	4.59	ene.	(†)	
						1,500	853.4	−2.8	.....	96	4.65	ene.	(†)	
3:00	976.0	−7.4	92	nnw.	8.9	1,644	838.1	−2.6	−0.16	95	4.67	ene.	(†)	10/10 A.St., e.; kites broke away.

* Ice on anemometer.

† Anemometer did not record.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 18, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:00	971.6	−2.3	94	se.	2.2	444	971.6	−2.3	.....	94	4.74	se.	2.2	10/10 St., sse.
						500	964.7	−2.7	.....	95	4.64	se.	2.6	
2:22	971.6	−2.3	94	se.	3.1	746	935.2	−4.6	0.76	97	4.03	se.	4.6	
						1,000	905.0	−3.2	.....	99	4.63	sse.	4.7	Altitude of St. base about 700 m.
3:05	971.5	−2.0	94	ese.	3.6	1,231	879.5	−1.9	−0.56	100	5.22	s.	4.7	
						1,250	877.2	−1.9	.....	99	5.17	s.	4.8	
						1,500	850.4	−2.3	.....	89	4.49	s.	6.8	
						1,750	824.2	−2.6	.....	79	3.89	s.	8.7	
3:09	971.3	−2.0	94	ese.	3.6	1,767	822.3	−2.6	0.23	79	3.89	s.	9.8	
						1,750	824.2	−2.5	.....	80	3.97	s.	9.6	Altitude of St. base about 1,350 m.
						1,500	850.4	−1.7	.....	88	4.66	s.	7.9	
						1,250	877.2	−0.9	.....	96	5.44	s.	6.0	
3:17	971.1	−2.0	94	ese.	1.3	1,232	879.5	−0.8	−0.41	97	5.54	s.	5.9	
						1,000	905.0	−1.8	.....	92	4.84	sse.	5.3	
3:30	970.8	−2.0	94	ese.	2.7	770	931.7	−2.7	0.21	88	4.29	ese.	4.8	
						750	934.0	−2.7	.....	88	4.29	ese.	4.6	
						500	963.9	−2.1	.....	93	4.77	e.	3.1	
3:34	970.6	−2.0	94	e.	2.7	444	970.6	−2.0	.....	94	4.86	e.	2.7	10/10 St., sse.

December 19, 1918.

A. M.														
8:25	964.3	−1.6	96	s.	4.9	444	964.3	−1.6	.....	96	5.14	s.	4.9	10/10 St., s.
						500	957.7	−2.2	.....	96	4.89	s.	5.8	
						750	927.9	−4.8	.....	94	3.84	s.	10.6	Altitude of St. base about 650 m.
8:35	964.4	−2.0	96	s.	7.2	855	915.5	−5.9	1.05	93	3.45	s.	11.2	
						1,000	898.5	−4.4	.....	80	3.38	s.	11.7	
						1,251	870.8	−1.8	.....	58	3.05	s.	12.6	
8:40	964.4	−2.3	96	s.	7.6	1,379	856.9	−0.4	−1.05	47	2.78	s.	13.0	
						1,500	843.6	−0.7	.....	46	2.65	s.	12.9	
						1,750	817.3	−1.4	.....	43	2.34	ssw.	12.6	
						2,000	792.4	−2.1	.....	40	2.05	ssw.	12.3	
8:49	964.4	−2.6	96	ssw.	7.6	2,043	788.2	−2.2	0.27	39	1.99	ssw.	12.3	
						2,250	768.0	−2.7	.....	42	2.05	ssw.	12.1	
						2,500	744.4	−3.3	.....	46	2.13	sw.	11.9	
9:03	964.6	−2.9	96	s.	10.3	2,725	723.4	−3.9	0.25	49	2.16	sw.	11.7	
						2,750	721.3	−4.0	.....	49	2.14	sw.	11.9	
						3,000	698.9	−5.5	.....	48	1.84	sw.	14.0	
						3,250	676.9	−6.9	.....	47	1.60	sw.	16.1	
						3,500	655.5	−8.3	.....	47	1.42	sw.	18.3	
9:23	964.8	−3.0	96	ssw.	9.4	3,727	633.3	−9.6	0.60	46	1.24	sw.	20.2	
						3,500	655.5	−8.2	.....	48	1.47	sw.	17.9	
						3,250	676.9	−6.6	.....	50	1.75	sw.	15.4	
						3,000	699.0	−5.1	.....	52	2.07	sw.	12.8	
						2,750	722.0	−3.5	.....	54	2.46	sw.	10.3	
9:45	965.0	−3.0	96	ssw.	7.2	2,684	727.8	−3.1	0.08	55	2.59	sw.	9.6	
						2,500	745.1	−2.9	.....	53	2.54	sw.	10.2	
						2,250	769.0	−2.7	.....	51	2.49	sw.	11.0	
9:59	965.2	−2.6	91	ssw.	7.2	2,084	785.2	−2.6	0.59	50	2.46	sw.	11.6	
						2,000	793.5	−2.1	.....	49	2.51	sw.	11.4	
						1,750	818.3	−0.6	.....	45	2.61	sw.	10.7	
						1,500	844.5	0.8	.....	42	2.73	ssw.	10.0	
10:12	965.3	−2.6	91	ssw.	7.6	1,386	856.9	1.5	−1.41	40	2.72	ssw.	9.7	
						1,250	871.3	−0.4	.....	53	3.13	ssw.	9.4	
						1,000	899.5	−3.9	.....	78	3.44	ssw.	8.8	
10:23	965.3	−2.8	91	ssw.	7.6	861	915.5	−5.9	0.70	92	3.41	ssw.	8.5	
						750	928.8	−5.1	.....	92	3.66	ssw.	8.6	
						500	958.4	−3.4	.....	91	4.19	ssw.	8.8	
10:29	965.3	−3.0	91	ssw.	8.9	444	965.3	−3.0	.....	91	4.32	ssw.	8.9	10/10 St., ssw.

December 20, 1918.

P. M.														
3:36	962.0	−5.3	100	nne.	3.6	444	962.0	−5.3	.....	100	3.91	nne.	3.6	10/10 St., nnw.
						500	955.3	−5.4	.....	100	3.88	nne.	3.5	
4:15	962.1	−5.9	100	ne.	5.4	633	939.1	−5.6	0.16	100	3.81	nne.	3.2	Light fog from 3:30 p. m. to end of flight.
						750	925.3	−4.2	.....	89	3.83	ne.	2.9	
						1,000	896.2	−1.4	.....	67	3.64	ene.	2.2	
4:20	962.1	−6.0	100	ne.	5.4	1,039	892.0	−0.9	−1.46	63	3.57	ene.	2.1	
						1,000	896.2	−1.6	.....	67	3.58	ene.	2.2	
						750	925.3	−6.0	.....	92	3.39	ene.	2.9	
4:28	962.1	−6.2	100	ne.	4.9	676	933.9	−7.3	0.47	100	3.29	ene.	3.1	Altitude of St. base about 600 m.
						500	955.3	−6.5	.....	100	3.53	ne.	4.5	
4:32	962.1	−6.2	100	ne.	4.9	444	962.1	−6.2	.....	100	3.62	ne.	4.9	10/10 St., nne.

December 21, 1918.

P. M.														
2:15	961.9	−4.9	98	n.	12.5	444	961.9	−4.9	.....	98	3.97	n.	12.5	10/10 St., n.
						500	955.7	−5.2	.....	98	3.86	n.	14.1	
						750	925.2	−6.5	.....	100	3.53	n.	21.1	
2:16	961.9	−4.9	98	n.	12.5	760	923.9	−6.6	0.54	100	3.50	n.	21.4	
						1,000	896.3	−3.4	.....	100	4.60	nne.	18.1	Altitude of St. base about 850 m.
2:20	961.9	−4.9	98	n.	12.5	1,162	878.0	−1.2	−1.34	100	5.53	nne.	15.8	
						1,250	868.3	−1.5	.....	100	5.39	nne.	15.1	
						1,500	841.4	−2.3	.....	100	5.04	nne.	13.1	Snowing throughout flight.
2:26	961.9	−5.0	98	n.	13.4	1,655	825.3	−2.8	0.32	100	4.84	nne.	11.9	
						1,750	815.0	−3.1	.....	100	4.71	nne.	11.7	
						2,000	790.0	−4.0	.....	100	4.37	nne.	11.3	
						2,250	765.5	−4.8	.....	100	4.08	nne.	10.8	

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 21, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:36	962.0	−5.1	98	n.	12.1	2,455	745.5	−5.5	0.36	100	3.84	nne.	10.4	
						2,250	765.5	−4.7		100	4.12	nne.	11.1	
						2,000	790.0	−3.8		100	4.44	nne.	12.0	
2:48	962.0	−5.2	98	n.	17.4	1,756	814.6	−2.9	0.14	100	4.80	nne.	12.9	
						1,750	815.0	−2.9		100	4.80	nne.	12.9	
						1,500	841.4	−2.5		100	4.96	nne.	14.2	
						1,250	868.3	−2.2		100	5.09	nne.	15.5	
2:58	962.1	−5.2	98	n.	17.4	1,190	874.9	−2.1	−1.22	100	5.13	nne.	15.8	
						1,000	896.3	−4.4		100	4.22	nne.	17.7	
3:14	962.3	−5.3	98	n.	17.4	749	925.5	−7.5	0.72	100	3.23	nne.	20.2	
						500	955.9	−5.7		98	3.70	n.	17.9	
3:19	962.4	−5.3	98	n.	17.4	444	962.4	−5.3		98	3.83	n.	17.4	10/10 St., n.

December 22, 1918.

A. M.														
9:32	973.1	−13.2	92	nnw.	1.8	444	973.1	−13.2		92	1.79	nnw.	1.8	9/10 Ci.St., nw.
						500	966.3	−13.8		92	1.69	nnw.	3.9	
						750	935.0	−16.3		94	1.37	nnw.	13.7	Faint partial solar halo, 22° radius, throughout flight.
9:35	973.2	−13.2	92	nnw.	1.8	850	922.3	−17.3	1.01	94	1.25	nnw.	17.6	
						1,000	904.0	−14.5		89	1.54	nnw.	15.5	
						1,250	875.0	− 9.7		76	2.03	n.	12 1	
9:50	973.4	−13.0	92	nnw.	3.1	1,272	872.7	− 9.3	−1.90	75	2.07	n.	11.8	
						1,500	847.0	− 9.6		69	1.86	n.	10.2	
						1.750	820.0	−10.0		62	1.61	n.	8.3	
						2.000	794.3	−10.4		54	1.36	n.	6.8	
10:06	973.7	−13.0	88	nnw.	2.7	2,070	787.1	−10 5	0.15	53	1.31	n.	6.3	
						2.250	769.0	−11.3		47	1.09	n.	6.1	
						2.500	744.5	−12 3		39	0.82	n.	5 9	
						2,750	720.9	−13.3		32	0.62	n.	5.7	4/10 Ci.St., nw.; 4/10 St.Cu., nw.
10:51	974.2	−13.0	88	nnw.	1.8	2.897	706.7	−13.9	0.45	27	0.49	n.	5.5	
						2.750	720 9	−13.1		20	0.39	n.	5.9	
						2.500	745.6	−12.4		21	0.44	n.	6.3	
						2,250	770.8	−10.7		24	0.59	nnw.	7.4	
11:27	974.5	−13.4	84	nnw.	3.1	2.129	782.6	−10.1	0.07	23	0.59	nnw.	7.7	
						2.000	796.0	−10.0		26	0.68	nnw.	8.1	
						1,750	821.5	− 9.9		35	0.92	nnw.	9.0	
11:41	974.6	−13.4	84	nnw.	3.1	1,670	829.6	− 9 8	−0.55	38	1.00	nnw.	9.3	
						1,500	848.0	−10.7		57	1.39	nnw.	10.7	
11:56	974.7	−13.4	84	nnw.	3.1	1,255	875.8	−12.1	−0.89	85	1.83	nnw.	12.8	
						1,030	905.7	−14.4		84	1.46	nnw.	14.3	
P. M.														
12:09	974.7	−13.4	84	nnw.	2.7	863	922.3	−15.6	0.53	84	1.29	nnw.	15.1	
						750	936.4	−15.0		83	1.37	nnw.	12.0	
						500	968.1	−13.7		84	1.56	nnw.	4.7	
12:18	974.7	−13.4	84	nnw.	3.1	444	974.7	−13.4		84	1.60	nnw.	3.1	3/10 Ci.St., nw.; 5/10 St.Cu., nnw.

December 23, 1918.

P. M.														
2:25	978.0	−17.6	88	n.	5.4	444	978.0	−17.6		88	1.14	n.	5.4	Cloudless.
						500	970.9	−17.5		90	1.17	nne.	4.8	
3:08	978.0	−17.6	88	n.	5.8	645	952.2	−17.2	−0.20	95	1.27	ne.	3.4	
						750	930.0	−16.8		89	1.24	ne.	4.0	
4:07	978.0	−18.0	88	nne.	3.6	942	915.2	−16.1	−0.37	77	1.15	ene.	5.0	
						1,000	908.2	−15.6		75	1.17	ene.	5.1	
						1,250	879.0	−13.1		64	1.25	ese.	5.8	
4:10	978.0	−18.0	88	nne.	3.6	1,309	872.3	−12.5	−0.48	62	1.28	ese.	5.9	
						1,250	879.0	−12.5		61	1.26	ese.	5.5	
						1,000	908.2	−12.4		58	1.21	ene.	4.8	
4:16	978.0	−18.2	88	nne.	3.1	959	913.5	−12.4	−1.50	57	1.19	ene.	4.7	
						750	939.0	−15.5		74	1.16	ene.	4.7	
4:20	978.0	−18.2	88	nne.	3.1	672	948.8	−16.7	−0.75	80	1.13	ene.	4.9	
						500	970.9	−18.0		85	1.07	nne.	3.5	
4:26	978.0	−18.4	88	nne.	3.1	444	978.0	−18.4		88	1.06	nne.	3.1	Cloudless.

December 24, 1918.

A. M.														
10:14	974.2	−23.7	80	s.	1.8	444	974.2	−23.7		80	0.57	s.	1.8	Few A.St., w.
						500	967.0	−21.2		75	0.68	s.	2.4	
11:24	973.8	−21.7	83	ssw.	1.3	703	940.8	−12.3	−4.40	56	1.18	wsw.	4.6	
						750	935.0	−12.3		55	1.16	wsw.	4.6	
						1,000	904.6	−12.5		50	1.04	wsw.	4.5	
						1,250	876.0	−12.6		46	0.94	wsw.	4.5	
11:30	973.8	−21.7	83	ssw.	1.3	1,293	870.7	−12.6	0.05	45	0.92	wsw.	4.5	
						1,500	847.8	−12.6		41	0.84	w.	4.2	
11:34	973.8	−21.4	84	ssw.	1.3	1,710	824.5	−12.6	0.20	37	0.76	w.	3.9	
						1,500	847.8	−11.7		38	0.85	w.	4.4	
11:41	973.7	−20.9	85	ssw.	1.3	1,294	870.7	−10.9	−0.32	38	0.91	w.	4.9	
						1,250	876.0	−11.0		39	0.92	w.	4.9	
						1,000	904.6	−11.8		45	0.99	wsw.	5.0	
						750	935.0	−12.6		51	1.05	sw.	5.1	
11:48	973.7	−20.8	85	ssw.	1.8	729	937.4	−12.7	−2.70	51	1.04	sw.	5.1	
						500	966.8	−18.9		73	0.83	ssw.	2.4	
11:56	973.6	−20.4	78	ssw.	1.8	444	973.6	−20.4		78	0.77	ssw.	1.8	Few A.St., w.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 25, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:39	969.2	−19.2	87	ssw.	4.0	444	959.2	−19.2		87	0.97	ssw.	4.0	6/10 A.St., sw.
						500	952.2	−17.0		84	1.15	sw.	4.9	
						750	921.9	− 8.0		68	2.11	w.	9.1	
9:07	959.1	−19.3	87	ssw.	3.1	850	909.7	− 3.5	−3.87	62	2.83	wnw.	10.8	
						1,000	892.4	− 3.9		62	2.75	wnw.	10.2	
						1,250	864.5	− 4.5		62	2.60	nw.	9.3	
9:16	959.0	−19.3	87	ssw.	3.6	1,434	844.5	− 5.0	0.26	62	2.49	nw.	8.6	
						1,500	837.4	− 5.3		62	2.42	nw.	9.3	
						1,750	811.0	− 6.3		61	2.19	nw.	12.0	
						2,000	785.4	− 7.4		60	1.96	nw.	14.6	
9:42	958.8	−18.4	88	ssw.	3.1	2,248	760.8	− 8.4	0.42	59	1.76	nw.	17.3	
						2,500	736.0	−10.1		58	1.49	nw.	17.1	
						2,750	712.3	−11.8		57	1.26	wnw.	16.9	
						3,000	689.8	−13.5		56	1.06	wnw.	16.7	
						3,250	667.8	−15.2		55	0.89	w.	16.5	
10:01	958.7	−17.0	86	ssw.	2.7	3,346	659.1	−15.9	0.68	55	0.84	w.	16.4	
						3,500	646.0	−16.9		54	0.75	w.	16.0	
						3,750	624.4	−18.6		51	0.60	w.	15.3	
						4,000	603.8	−20.3		49	0.49	w.	14.6	
						4,250	583.9	−21.9		47	0.40	w.	14.0	
						4,500	564.3	−23.5		45	0.33	w.	13.4	
10:34	958.7	−14.0	86	ssw.	2.2	4,566	559.3	−24.0	0.66	44	0.30	w.	13.2	
						4,750	544.7	−25.3		45	0.27	w.	13.2	
						5,000	526.0	−27.1		46	0.23	w.	13.2	
						5,250	507.7	−28.9		47	0.20	w.	13.1	
						5,500	490.3	−30.7		48	0.17	w.	13.1	2/10 A.Cu., w.
P. M.														
12:38	958.0	− 5.3	86	wnw.	3.1	5,627	481.7	−31.6	0.76	49	0.16	w.	13.1	
						5,500	490.3	−30.6		49	0.17	w.	13.8	
						5,250	507.2	−28.6		50	0.22	w.	15.1	6/10 A.Cu., w.
						5,000	525.0	−26.6		50	0.24	w.	16.3	
						4,750	543.4	−24.7		51	0.33	w.	17.6	
1:23	957.9	− 4.0	77	wnw.	7.2	4,565	557.9	−23.2	0.43	51	0.38	w.	18.6	
						4,500	562.6	−22.9		53	0.41	w.	18.2	4/10 A.St., wnw.: 3/10 A.Cu., wnw.
						4,250	582.0	−21.8		61	0.52	w.	16.6	
						4,000	601.9	−20.8		69	0.73	w.	14.9	
						3,750	622.6	−19.7		77	1.01	w.	13.3	
						3,500	644.3	−18.6		86	1.01	w.	11.7	
1:44	958.0	− 3.8	77	wnw.	7.2	3,271	664.8	−17.6	0.67	93	1.20	w.	10.2	
						3,250	666.7	−17.5		93	1.21	w.	10.2	
						3,000	689.0	−15.8		94	1.44	wnw.	10.1	
						2,750	712.0	−14.1		95	1.70	wnw.	10.1	
						2,500	736.0	−12.4		95	1.99	nw.	10.0	
2:02	958.1	− 3.6	77	wnw.	7.2	2,322	753.4	−11.2	0.64	96	2.24	nw.	10.0	
						2,250	760.6	−10.7		96	2.34	nw.	10.0	9/10 A.St., nw.
						2,000	785.4	− 9.1		91	2.56	nnw.	9.8	
						1,750	811.0	− 7.5		86	2.78	nnw.	9.7	
2:11	958.2	− 3.6	77	wnw.	7.2	1,727	813.7	− 7.4	−0.86	86	2.83	nnw.	9.7	
2:17	958.3	− 3.6	77	wnw.	7.2	1,597	827.5	− 9.3	1.46	100	2.76	nnw.	9.4	
						1,500	837.7	− 8.5		96	2.84	nnw.	9.2	
						1,250	864.7	− 6.3		85	3.05	nnw.	8.8	
						1,000	892.5	− 4.2		74	3.18	nnw.	8.4	
2:37	958.5	− 3.4	82	wnw.	6.7	829	913.1	− 2.7	−0.18	67	3.27	nnw.	8.1	
						750	921.9	− 2.8		70	3.39	nnw.	7.9	
						500	951.7	− 3.3		80	3.71	wnw.	7.3	
2:43	958.5	− 3.4	82	wnw.	7.2	444	958.5	− 3.4		82	3.77	wnw.	7.2	9/10 A.St., nw.

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A. M.														
8:43	960.8	−7.4	95	nnw.	2.7	444	960.8	− 7.4		95	3.10	nnw.	2.7	10/10 St., nnw.
						500	953.7	− 7.8		95	2.99	nnw.	3.4	
						750	923.3	− 9.3		96	2.65	nnw.	6.4	
8:50	960.8	−7.4	95	nnw.	2.2	777	920.3	− 9.5	0.63	96	2.60	nnw.	6.7	
9:07	960.8	−7.3	95	nnw.	2.7	1,000	893.7	−10.8		95	2.30	nnw.	7.3	Altitude of St. base about 1,100 m.
						1,249	8 5.5	−12.3	0.59	93	1.96	nnw.	7.9	
						1,500	837.7	−11.9		93	2.04	nnw.	9.2	
						1,750	810.6	−11.5		93	2.11	nw.	10.6	
9:21	960.8	−7.0	95	nnw.	2.7	1,825	802.7	−11.4	−0.15	93	2.13	nw.	11.0	
						2,000	784.8	−12.4		93	1.94	nw.	11.4	
						2,250	759.3	−13.9		92	1.68	nnw.	11.9	
						2,500	734.7	−15.3		92	1.47	nnw.	12.4	
9:35	960.8	−7.0	95	nnw.	2.2	2,582	726.8	−15.8	0.58	92	1.41	nnw.	12.6	
						2,750	710.8	−17.0		90	1.23	nnw.	(*)	
						3,000	687.2	−18.8		86	0.99	nnw.	(*)	
						3,250	664.3	−20.5		83	0.81	nnw.	(*)	
10:37	961.0	−6.4	92	nnw.	3.6	3,358	651.9	−21.3	0.71	81	0.74	nnw.	(*)	
						3,250	664.3	−20.5		82	0.80	nnw.	(*)	
						3,000	687.2	−18.8		84	0.97	nnw.	(*)	
						2,750	710.8	−17.0		85	1.16	nnw.	(*)	
						2,500	734.7	−15.3		87	1.39	nnw.	(*)	
11:07	961.1	−6.4	92	nnw.	5.8	2,270	757.7	−13.6	0.35	89	1.67	nnw.	(*)	
						2,250	759.3	−12.5		89	1.84	nnw.	(*)	
						2,000	784.8	−12.7		89	1.82	nnw.	(*)	
11:22	961.0	−6.4	92	nnw.	5.8	1,813	804.2	−12.0	0.02	89	1.93	nnw.	(*)	
						1,750	810.8	−12.0		89	1.93	nnw.	(*)	
						1,500	837.9	−11.9		90	1.97	nnw.	(*)	
11:39	960.9	−6.3	92	nnw.	6.3	1,251	865.5	−11.9	0.58	90	1.97	nnw.	(*)	
						1,000	894.3	−10.4		91	2.28	nnw.	(*)	Light snow throughout flight.
						750	924.0	− 9.0		93	2.64	nnw.	(*)	
11:52	960.8	−6.2	92	nnw.	6.3	651	935.5	− 8.4	1.16	93	2.78	nnw.	(*)	
						500	953.7	− 6.6		92	3.22	nnw.	(*)	
11:56	960.8	−6.0	92	nnw.	6.7	444	960.8	− 6.0		92	3.39	nnw.	6.7	10/10 St., nnw.

*Instrument failed to record on account of ice.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 27, 1918 (No. 1).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m.p.s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m.p.s.*	
8:17	968.2	−9.0	94	nnw.	5.4	444	968.2	− 9.0	.....	94	2.67	nnw.	5.4	10/10 St., n.; light snow throughout flight.
						500	961.3	− 9.6	.....	95	2.56	nnw.	(*)	
8:31	968.2	−8.9	94	nnw.	4.9	616	917.0	−10.8	1.05	98	2.37	n.	(*)	
						750	930.7	−11.5	.....	98	2.22	n.	(*)	Altitude of St. base about 800 m.
						1,000	900.5	−12.7	.....	98	2.00	n.	(*)	
9:03	968.2	−8.9	94	n.	4.9	1,017	895.2	−12.9	0.51	98	1.96	n.	(*)	
						1,000	900.5	−12.7	.....	98	2.00	n.	(*)	
						750	930.7	−11.3	.....	99	2.29	n.	(*)	
9:07	968.2	−8.9	94	n.	4.9	743	931.5	−11.3	0.80	99	2.29	n.	(*)	
						500	961.3	− 9.3	.....	95	2.62	n.	(*)	
9:11	968.2	−8.9	94	n.	4.9	444	968.2	− 8.9	.....	94	2.69	n.	4.9	10/10 St., n.

December 27, 1918 (No. 2).

P. M.														
4:11	965.1	− 9.2	88	sw.	4.0	444	965.1	− 9.2	.....	88	2.46	sw.	4.0	10/10 St.Cu.?
						500	958.4	− 9.7	.....	90	2.40	sw.	4.3	10/10 A.St., nw
4:28	965.0	− 9.6	88	sw.	4.9	730	929.9	−11.7	0.87	100	2.23	sw.	5.7	
						750	927.3	−11.8	.....	100	2.21	sw.	5.8	
						1,000	897.1	−13.0	.....	98	1.94	wsw.	6.8	
4:46	964.9	−10.0	87	sw.	4.9	1,130	882.2	−13.6	0.48	97	1.82	wsw.	7.2	
						1,250	868.5	−12.1	.....	89	1.91	wsw.	7.6	
						1,500	840.5	− 8.9	.....	72	2.06	w.	8.3	
5:00	964.8	−10.2	87	wsw.	4.5	1,744	814.5	− 5.8	−1.27	55	2.06	wnw.	9.1	
						1,750	814.0	− 5.9	.....	54	2.00	wnw.	9.1	
						2,000	788.4	− 6.6	.....	48	1.68	wnw.	9.3	
						2,250	763.4	− 7.3	.....	42	1.38	nw.	9.6	
						2,500	739.1	− 8.1	.....	35	1.07	nw.	9.8	
5:16	964.8	−11.0	90	sw.	4.9	2,664	723.6	− 8.6	0.30	31	0.91	nw.	10.0	6/10 A.Cu., nw.; 4/10 A.St., nw
						2,750	715.7	− 8.9	.....	31	0.89	nw.	10.4	
						3,000	693.0	− 9.9	.....	31	0.81	nw.	11.7	
						3,250	670.9	−10.8	.....	30	0.73	nw.	12.8	
						3,500	649.0	−11.7	.....	29	0.65	nw.	14.0	
5:30	964.8	−11.0	90	sw.	4.9	3,553	644.7	−11.9	0.37	29	0.64	nw.	14.2	
						3,750	628.0	−13.3	.....	29	0.56	nw.	14.2	
						4,000	607.6	−15.1	.....	29	0.47	nw.	14.3	
						4,250	587.8	−16.0	.....	28	0.42	nw.	14.5	
						4,500	568.6	−18.6	.....	28	0.33	nw.	14.6	
						4,750	549.5	−20.4	.....	28	0.28	nw.	14.7	
5:54	964.8	−11.3	90	sw.	4.9	4,799	546.2	−20.7	0.70	28	0.27	nw.	14.7	
						5,000	531.6	−22.0	.....	34	0.29	nw.	15.1	
						5,250	513.3	−23.6	.....	41	0.30	nw.	15.6	
						5,500	496.0	−25.2	.....	48	0.29	nw.	16.1	10/10 St., wsw.
6:20	964.5	−11.6	88	sw.	5.4	5,667	484.9	−26.3	0.62	53	0.29	nw.	16.4	
						5,500	496.0	−25.3	.....	58	0.35	nw.	(†)	
						5,250	513.0	−23.9	.....	66	0.46	nw.	(†)	
						5,000	531.2	−22.4	.....	74	0.60	nw.	(†)	
						4,750	549.0	−20.9	.....	81	0.76	nw.	(†)	
						4,500	568.0	−19.5	.....	89	0.96	nw.	(†)	
						4,250	587.1	−18.0	.....	97	1.20	nw.	(†)	
7:31	963.6	−10.4	93	sw.	4.9	4,218	589.8	−17.9	0.53	98	1.23	nw.	(†)	
						4,000	607.0	−16.7	.....	98	1.38	nw.	(†)	
						3,750	627.4	−15.4	.....	99	1.57	nw.	(†)	
						3,500	648.5	−14.1	.....	99	1.77	nw.	(†)	
						3,250	670.0	−12.7	.....	99	2.02	nw.	(†)	
						3,000	692.5	−11.4	.....	99	2.27	nw.	(†)	
						2,750	715.7	−10.1	.....	100	2.57	nw.	(†)	
7:56	963.5	− 9.9	93	sw.	6.7	2,589	730.9	− 9.2	0.44	100	2.79	nw.	(†)	
						2,500	739.1	− 8.8	.....	100	2.89	nw.	(†)	
						2,250	763.4	− 7.7	.....	100	3.18	wnw.	(†)	
						2,000	788.4	− 6.6	.....	100	3.50	wnw.	(†)	
8:19	963.2	− 9.8	93	sw.	7.6	1,982	790.2	− 6.5	−0.60	100	3.53	wnw.	(†)	
						1,750	814.0	− 7.8	.....	83	2.61	wnw.	(†)	
8:24	963.1	− 9.8	93	sw.	5.8	1,699	819.1	− 8.2	0.65	79	2.40	wnw.	(†)	
						1,500	840.5	− 6.9	.....	69	2.35	w.	(†)	
8:35	962.9	−10.4	93	sw.	5.4	1,327	859.0	− 5.8	−0.80	60	2.25	wsw.	(†)	
						1,250	867.6	− 6.4	.....	66	2.35	wsw.	(†)	
						1,000	895.7	− 8.4	.....	87	2.60	wsw.	(†)	
8:50	962.7	−10.9	93	sw.	5.8	837	914.8	− 9.7	−3.05	100	2.67	wsw.	11.4	
						750	925.0	−10.0	.....	98	2.55	wsw.	10.2	
						500	955.8	−10.7	.....	94	2.29	sw.	6.6	
8:55	962.6	−10.9	93	sw.	5.8	444	962.6	−10.9	.....	93	2.22	sw.	5.8	5/10 St., wsw.

December 28, 1918.

A. M.														
8:14	959.0	−7.2	81	sw.	5.4	444	959.0	− 7.2	.....	81	2.69	sw.	5.4	9/10 A.St., nw.
						500	952.3	− 6.2	.....	76	2.75	sw.	6.9	
						750	922.7	− 1.1	.....	49	2.73	wsw.	13.5	
8:32	958.9	−8.0	74	sw.	7.6	913	900.3	2.8	−2.00	29	2.17	w.	18.5	
						1,000	894.0	2.4	.....	28	2.03	w.	18.5	
						1,250	866.7	0.5	.....	25	1.65	w.	18.5	
						1,500	840.2	− 1.4	.....	23	1.25	w.	18.5	
8:49	958.8	−8.2	77	ssw.	8.0	1,573	832.1	− 1.9	0.75	22	1.15	w.	18.5	
						1,750	814.0	− 3.3	.....	28	1.30	w.	18.3	
						2,000	788.3	− 5.3	.....	35	1.37	w.	18.0	
						2,250	763.6	− 7.4	.....	43	1.40	wnw.	17.7	
						2,500	739.4	− 9.4	.....	51	1.40	wnw.	17.4	

*Instrument failed to record on account of ice.

†Anemometer frozen.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 28, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:15	958.6	−7.8	77	sw.	4.9	2,601	729.5	−10.2	0.81	54	1.38	wnw.	17.3	
						2,750	716.0	−11.4		63	1.44	wnw.	17.6	
						3,000	692.8	−13.4		78	1.49	nw.	18.2	
9:30	958.5	−7.2	80	sw.	5.4	3,254	670.0	−15.4	0.79	94	1.49	nw.	18.8	
						3,500	648.3	−15.7		56	0.87	nw.	22.0	
9:45	958.5	−7.1	81	ssw.	5.6	3,579	641.5	−15.8	0.12	44	0.67	nw.	23.0	
						3,750	627.3	−16.4		47	0.68	nw.	24.6	
						4,000	607.0	−17.4		52	0.69	nnw.	26.8	
10:05	958.4	−5.8	74	sw.	4.9	4,088	599.1	−17.7	0.50	54	0.69	nnw.	27.7	1/10 Cl.St., nw.; 8/10 A.Cu. wnw.
						4,000	607.0	−17.1		52	0.70	nnw.	26.9	
						3,750	627.3	−15.5		49	0.77	nnw.	24.8	Altitude of A.Cu., base about 3,400 m.
						3,500	648.5	−13.9		45	0.82	nw.	22.7	
						3,250	671.0	−12.2		41	0.87	nw.	20.6	
11:03	958.7	−6.4	77	ne.	4.5	3,133	681.6	−11.6	0.68	39	0.88	nw.	19.6	
						3,000	693.5	−10.7		46	1.12	nw.	19.2	
						2,750	716.4	−9.0		59	1.68	nw.	18.3	
						2,500	739.4	−7.3		72	2.37	nw.	17.5	
11:32	958.2	−4.3	65	e.	3.1	2,327	756.1	−6.1	0.74	81	2.96	nw.	16.9	5/10 Cl., wnw.
						2,250	763.6	−5.5		79	3.03	nw.	16.4	
						2,000	788.3	−3.7		74	3.76	nw.	14.7	
						1,750	813.5	−1.9		69	3.60	nw.	13.0	
						1,500	839.1	0.0		64	3.91	nw.	11.3	
11:51	957.9	−3.2	69	sw.	2.2	1,377	852.2	0.9	−0.33	61	3.98	nw.	10.5	
						1,250	865.4	0.5		59	3.73	nw.	10.8	
						1,000	892.8	−0.3		54	3.22	nw.	11.6	
P. M.														
12:02	957.7	−3.0	68	ssw.	2.2	949	898.7	−0.5	−0.46	53	3.11	nw.	11.8	
						750	921.3	−1.4		56	3.05	wnw.	8.0	
						500	950.8	−2.6		60	2.95	w.	3.2	
12:12	957.5	−2.8	61	w.	2.2	444	957.5	−2.8		61	2.95	w.	2.2	4/10 Cl., wnw.

December 29, 1918.

A. M.														
8:39	958.7	−14.6	95	ne.	5.4	444	958.7	−14.6		95	1.62	ne.	5.4	5/10 Cl.St., w.; 5/10 A.St., w.
						500	952.0	−13.2		91	1.77	ne.	6.3	
						750	921.4	−6.7		74	2.57	ese.	10.2	
8:53	958.7	−14.3	91	ne.	5.4	787	917.0	−5.8	−2.57	72	2.70	ese.	10.9	
						1,000	892.3	−4.5		59	2.47	ese.	9.3	
						1,250	864.5	−2.9		43	2.05	se.	7.5	
						1,500	838.0	−1.4		28	1.52	se.	5.6	
9:22	958.8	−13.0	92	ne.	5.4	1,513	834.6	−1.3	−0.62	27	1.48	se.	5.5	10/10 A.St., w.
						1,750	812.0	−2.3		22	1.11	sse.	6.5	
10:02	959.1	−12.1	92	ne.	3.1	1,931	793.9	−3.0	0.32	19	0.90	sse.	7.2	
						1,750	812.0	−2.6		20	0.98	sse.	7.0	
10:14	959.1	−11.8	92	ne.	4.5	1,516	833.6	−2.1	−0.46	22	1.13	sse.	6.7	
						1,500	838.0	−2.2		23	1.17	sse.	6.8	
						1,250	864.5	−3.3		33	1.67	sse.	8.1	
						1,000	892.3	−4.5		50	2.10	se.	9.5	
10:31	959.1	−11.6	92	ne.	5.4	891	905.5	−5.0	−1.43	56	2.25	se.	10.1	
						750	921.4	−7.0		68	2.30	ese.	8.6	
						500	952.0	−10.6		88	2.16	ene.	6.0	
10:40	959.1	−11.4	93	ne.	5.4	444	959.1	−11.4		93	2.02	ne.	5.4	10/10 A.St., w.

December 30, 1918.

P. M.														
1:26	965.3	−16.4	95	n.	17.9	444	965.3	−16.4		95	1.38	n.	17.9	10/10 St., ne., light snow; blizzard.
						500	958.0	−16.8		95	1.32	n.	18.4	
1:28	965.3	−16.6	95	n.	17.9	735	928.4	−18.5	0.72	97	1.15	n.	20.6	
						750	926.8	−18.2		97	1.18	n.	20.0	
						1,000	896.5	−13.6		99	1.86	ne.	10.7	
1:37	965.4	−16.8	95	n.	17.9	1,130	881.2	−11.2	−1.85	100	2.33	ene.	5.9	
						1,250	867.7	−11.8		100	2.21	ene.	5.8	
						1,500	839.7	−13.2		100	1.95	ne.	5.7	9/10 Cl.St.
2:09	965.6	−17.4	94	n.	17.9	1,658	822.5	−14.0	0.53	100	1.81	ne.	5.6	
						1,750	813.6	−14.3		100	1.76	ne.	5.6	
						2,000	786.4	−15.0		100	1.65	ne.	5.8	
						2,250	760.7	−15.8		100	1.53	nne.	6.0	
2:13	965.6	−17.5	94	n.	17.9	2,309	754.9	−16.0	0.38	100	1.50	nne.	6.0	
						2,250	760.7	−15.7		100	1.55	nne.	5.9	
						2,000	786.7	−14.6		100	1.71	nne.	5.5	
						1,750	813.0	−13.4		100	1.91	ne.	5.2	
						1,500	840.1	−12.2		100	2.13	ne.	4.8	
2:25	965.7	−17.7	94	n.	17.9	1,382	853.2	−11.7	0.28	100	2.23	ne.	4.6	
						1,250	867.7	−11.3		100	2.31	ne.	7.0	
						1,000	896.5	−10.6		100	2.48	ne.	11.4	
2:43	965.8	−18.0	94	n.	17.9	956	901.9	−10.5	−4.22	100	2.48	ne.	12.2	
						750	926.3	−19.2		96	1.07	nne.	15.8	
2:51	965.8	−18.2	94	n.	17.9	724	930.1	−20.3	0.68	96	0.96	nne.	16.2	
						500	958.0	−18.8		94	1.08	n.	17.6	
2:56	965.9	−18.4	94	n.	17.9	444	965.9	−18.4		94	1.13	n.	17.9	9/10 Cl.St., blizzard.

TABLE 13.—*Free-air data from kite flights at Ellendale Aerological Station, December, 1918*—Continued.

December 31, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:28	972.0	−26.6	74	nnw.	8.9	444	972.0	−26.6	.....	74	0.39	nnw.	8.9	5/10 A.St., nw.
						500	964.5	−25.9	.....	72	0.41	nnw.	9.3	
						750	931.9	−22.5	.....	63	0.50	nne.	10.9	
8:38	972.0	−26.6	71	nnw.	8.9	850	919.4	−21.2	−1.33	59	0.54	nne.	11.6	
						1,000	901.0	−20.0	.....	66	0.68	nne.	10.0	
						1,250	871.3	−18.1	.....	76	0.93	nne.	7.2	
8:56	972.0	−26.7	74	nnw.	8.9	1,262	869.7	−18.0	−0.78	77	0.95	nne.	7.1	
						1,500	842.6	−17.7	.....	79	1.01	n.	7.4	
9:24	972.0	−26.4	63	nnw.	10.7	1,727	817.5	−17.4	−0.13	81	1.07	nnw.	7.6	
						1,750	815.0	−17.5	.....	81	1.05	nnw.	7.5	
						2,000	788.0	−18.8	.....	81	0.93	nnw.	6.3	
						2,250	761.7	−20.1	.....	81	0.83	nw.	5.2	9/10 A.St., nw.
						2,500	735.9	−21.4	.....	81	0.73	nw.	4.0	
10:35	972.2	−25.7	66	n.	9.4	2,521	733.9	−21.5	0.45	81	0.72	nw.	3.9	
						2,500	735.9	−21.4	.....	81	0.73	nw.	4.0	
						2,250	761.7	−20.5	.....	81	0.79	nw.	4.9	
						2,000	787.3	−19.5	.....	80	0.86	nw.	5.7	
						1,750	814.0	−18.6	.....	80	0.94	nw.	6.6	
10:53	972.3	−25.6	66	n.	8.9	1,729	816.0	−18.5	−0.16	80	0.95	nw.	6.7	
						1,500	841.5	−18.9	.....	52	0.59	nnw.	6.3	
11:08	972.3	−25.5	66	nnw.	10.7	1,360	857.4	−19.1	−1.32	35	0.39	n.	6.0	
						1,250	870.0	−20.5	.....	37	0.36	n.	6.6	
						1,000	900.2	−23.8	.....	42	0.30	nnw.	7.9	
						750	931.9	−27.1	.....	47	0.24	nnw.	9.2	
11:37	972.1	−25.6	66	nnw.	9.8	729	934.5	−27.4	0.63	47	0.23	nnw.	9.3	
						500	964.5	−26.0	.....	62	0.35	nnw.	9.7	
11:39	972.1	−25.6	66	nnw.	9.8	444	972.1	−25.6	.....	66	0.39	nnw.	9.8	9/10 A.St., nw.

TABLE 14.—*Free-air data from kite flights at Groesbeck Aerological Station, September, 1918.*

September 25, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
1:00	993.3	27.0	70	ssw.	4.9	141	993.3	27.0	.....	70	24.96	ssw.	4.9	1/10 St.Cu., s.; few St., ssw.
						250	981.4	26.2	.....	71	24.15	ssw.	6.4	
						500	953.8	24.2	.....	72	21.74	s.	9.7	
1:25	993.1	29.2	59	s.	7.2	514	952.1	24.1	0.78	72	21.61	s.	9.9	
						750	926.5	23.0	.....	77	21.64	s.	9.2	Few St.Cu., s.; few Cu., ssw.; few St., ssw.
1:51	992.7	29.8	56	s.	6.7	877	913.2	22.4	0.47	80	21.67	s.	8.8	
						1,000	900.0	21.2	.....	84	21.15	s.	8.8	
						1,250	874.5	18.9	.....	93	20.31	s.	8.7	
2:20	992.8	30.4	56	s.	7.2	1,404	859.2	17.3	0.96	99	19.55	s.	8.6	
						1,250	874.5	18.6	.....	94	20.14	s.	8.8	
						1,000	900.0	20.7	.....	86	21.00	sse.	9.1	
2:40	993.0	30.3	54	sse.	7.2	897	911.4	21.6	0.95	83	21.41	sse.	9.2	
						750	926.5	23.0	.....	78	21.92	sse.	8.5	
						500	953.8	25.4	.....	70	22.72	sse.	7.3	
2:50	993.1	30.3	54	sse.	6.7	445	959.7	25.9	1.68	68	22.73	sse.	7.0	
						250	981.4	29.2	.....	61	24.72	sse.	6.6	
3:03	993.1	31.0	57	sse.	6.3	141	993.1	31.0	.....	57	25.62	sse.	6.3	Few Cu., ssw.; few St., ssw.

September 26, 1918.

P. M.														
2:20	994.8	24.8	69	nne.	8.9	141	994.8	24.8	.....	69	21.60	nne.	8.9	10/10 St.Cu., n.
						250	982.5	23.5	.....	68	19.69	nne.	9.4	
						500	954.8	20.6	.....	65	15.78	nne.	10.5	
2:24	994.8	24.8	69	n.	6.7	533	950.9	20.2	1.17	65	15.39	nne.	10.7	
						750	927.2	18.2	.....	79	16.51	nne.	10.5	
						1,000	900.7	15.8	.....	94	16.87	nne.	10.2	
2:48	994.7	24.8	68	n.	6.3	1,031	897.4	15.5	0.94	96	16.91	nne.	10.2	
						1,250	874.3	14.3	.....	97	15.81	nne.	9.3	7/10 St.Cu., n.
						1,500	848.9	12.9	.....	98	14.58	nne.	8.2	
						1,750	824.3	11.5	.....	99	13.43	nne.	7.2	
3:23	994.7	25.3	69	nne.	6.3	1,957	804.0	10.4	0.49	100	12.61	nne.	6.3	
						1,750	824.3	11.3	.....	97	12.99	nne.	6.7	
						1,500	848.9	12.4	.....	93	13.39	nne.	7.2	
						1,250	874.3	13.4	.....	90	13.81	nne.	7.6	
						1,000	900.7	14.5	.....	86	14.20	nne.	8.1	
3:47	994.8	25.0	70	nne.	6.7	925	906.4	14.8	1.40	85	14.31	nne.	8.2	
						750	927.2	17.4	.....	87	17.29	nne.	9.1	
4:05	994.9	25.0	69	nne.	6.7	501	954.7	21.1	1.08	90	22.53	nne.	10.4	
						250	982.5	23.8	.....	85	25.07	nne.	7.8	
4:12	994.9	25.0	69	nne.	6.7	141	994.9	25.0	.....	69	21.86	nne.	6.7	6/10 St.Cu., n.

September 27, 1918.

A. M.														
8:11	1,002.5	16.9	75	nne.	5.8	141	1,002.5	16.9	.....	75	.....	nne.	5.8	10/10 St., nne.
						250	989.6	15.6	.....	.....	.....	nne.	.....	
8:25	1,002.6	17.2	76	nne.	5.8	498	951.2	•12.7	1.18	.....	.....	nne.	.....	
						750	933.0	11.2	.....	.....	.....	nne.	.....	8/10 St., nne.
8:41	1,002.8	17.8	74	nne.	11.2	884	920.4	10.5	0.60	.....	.....	nne.	.....	3/10 St.Cu., n.; 7/10 St., n.
						1,000	905.3	11.6	.....	.....	.....	n.	.....	Average altitude of St. base about 1,400 m.
8:50	1,002.9	17.8	73	nne.	8.0	1,032	902.2	11.9	−0.83	.....	.....	n.	.....	
						1,250	878.6	10.6	.....	.....	.....	n.	.....	
						1,500	853.0	9.0	.....	.....	.....	n.	.....	
9:11	1,003.1	18.0	77	n.	8.0	1,734	829.6	7.6	0.61	.....	.....	n.	.....	10 St., n.
						1,750	828.0	7.5	.....	.....	.....	n.	.....	
						2,000	803.1	6.4	.....	.....	.....	n.	.....	
						2,250	779.0	5.1	.....	.....	.....	n.	.....	
						2,500	755.2	3.9	.....	.....	.....	n.	.....	
9:50	1,003.3	18.0	65	n.	12.5	2,739	733.6	2.7	0.48	.....	.....	n.	.....	
						2,500	755.0	3.8	.....	.....	.....	n.	.....	
10:33	1,003.2	18.6	66	ne.	8.5	2,288	775.2	4.8	0.73	.....	.....	n.	.....	
						2,250	778.6	5.1	.....	.....	.....	n.	.....	
						2,000	802.5	6.9	.....	.....	.....	nne.	.....	7/10 St.Cu., n.
						1,750	827.3	8.7	.....	.....	.....	nne.	.....	
11:17	1,002.8	19.6	69	nne.	8.5	1,729	829.6	8.9	0.13	.....	.....	nne.	.....	
						1,500	852.5	9.2	.....	.....	.....	nne.	.....	10/10 St.Cu., n.
						1,250	878.6	9.5	.....	.....	.....	n.	.....	Altitude of St.Cu. base about 1,330 m.
11:40	1,002.6	19.4	70	n.	7.6	1,013	904.0	9.8	0.83	.....	.....	n.	.....	
						1,000	905.3	9.9	.....	.....	.....	n.	.....	6/10 St.Cu., n.
						750	933.0	12.0	.....	.....	.....	n.	.....	
						500	960.9	14.1	.....	.....	.....	n.	.....	
11:49	1,002.5	20.1	67	n.	8.5	350	978.2	15.3	2.15	.....	.....	n.	.....	
						250	989.6	17.5	.....	.....	.....	n.	.....	
P. M.														
12:02	1,002.4	19.8	69	n.	8.5	141	1,002.4	19.8	.....	69	.....	n.	8.5	3/10 St. Cu., n.; 3/10 Cu., n.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918.*

October 7, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt/100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
12:21	1,000.3	22.2	92	se.	2.7	141	1,000.3	22.2	.....	92	24.63	se.	2.7	8 10 A.St., nw.; 2/10 St., se.
.....	.....	.....	.....	.....	.....	250	987.8	22.2	.....	87	23.29	se.	3.3	Thun lerst rm in s.
.....	.....	.....	.....	.....	.....	500	960.0	22.1	.....	75	19.95	sse.	4.6	Rain from 12:35 to 1:10 p. m.
.....	.....	.....	.....	.....	.....	750	932.8	22.0	.....	63	16.66	sse.	5.9	
1:03	1,000.3	22.1	91	ese.	1.8	808	926.4	22.0	0.03	60	15.86	sse.	6.2	
.....	.....	.....	.....	.....	.....	1,000	906.2	20.8	.....	63	15.48	sse.	6.2	10/10 A.St., nw.
.....	.....	.....	.....	.....	.....	1,250	880.2	19.2	.....	67	14.91	sse.	6.2	
.....	.....	.....	.....	.....	.....	1,500	854.8	17.6	.....	71	14.29	sse.	6.2	
2:30	1,000.0	21.8	86	ese.	2.7	1,522	852.7	17.5	0.63	71	14.20	sse.	6.2	9/10 A.St., nw.; few St., se.

October 9, 1918.

P. M.														
2:51	998.0	27.8	61	e.	5.4	141	998.0	27.8	.....	61	22.80	e.	5.4	3/10 Cl.St., n.; 1/10 Cu., n.
.....	.....	.....	.....	.....	.....	250	985.4	26.6	.....	66	22.99	e.	5.4	
.....	.....	.....	.....	.....	.....	500	957.5	23.7	.....	77	22.37	ene.	5.4	
.....	.....	.....	.....	.....	.....	750	930.5	20.9	.....	88	21.75	ne.	5.4	
3:38	997.7	26.4	66	ne.	7.2	774	928.2	20.6	1.14	89	21.60	ne.	5.4	
.....	.....	.....	.....	.....	.....	1,000	904.0	19.6	.....	81	18.48	ne.	6.1	
.....	.....	.....	.....	.....	.....	1,250	878.0	18.5	.....	72	15.34	ne.	6.8	5/10 Cl.St., w.; few Cu., w.
4:28	997.5	25.7	66	ene.	4.5	1,395	863.2	17.8	0.45	67	13.65	ne.	7.2	
.....	.....	.....	.....	.....	.....	1,500	852.6	17.0	.....	67	12.98	ne.	6.8	
.....	.....	.....	.....	.....	.....	1,750	828.0	15.6	.....	68	12.05	nne.	5.8	
.....	.....	.....	.....	.....	.....	2,000	804.1	14.0	.....	68	10.87	nne.	4.8	
5:51	997.6	25.0	70	ne.	3.6	2,103	794.0	13.4	0.58	68	10.45	nne.	4.4	4/10 Cl.St., w.; 5/10 St., w.
.....	.....	.....	.....	.....	.....	2,000	804.1	13.9	.....	67	10.64	nne.	4.5	
.....	.....	.....	.....	.....	.....	1,750	828.0	15.3	.....	66	11.47	nne.	4.7	
.....	.....	.....	.....	.....	.....	1,500	852.6	16.6	.....	65	12.28	nne.	4.9	
.....	.....	.....	.....	.....	.....	1,250	877.8	17.9	.....	63	12.92	nne.	5.2	
6:32	997.6	24.1	75	nne.	3.1	1,199	882.8	18.2	−0.23	63	13.17	nne.	5.2	
.....	.....	.....	.....	.....	.....	1,000	903.7	17.7	.....	85	17.21	nne.	5.0	
6:38	997.6	24.0	75	nne.	2.7	939	909.9	17.6	0.83	92	18.52	nne.	5.0	
.....	.....	.....	.....	.....	.....	750	930.5	19.2	.....	89	19.80	nne.	5.1	
.....	.....	.....	.....	.....	.....	500	957.5	21.2	.....	85	21.40	nne.	5.2	
6:46	997.6	24.0	71	nne.	2.7	409	967.4	22.0	0.67	83	21.05	nne.	5.3	
.....	.....	.....	.....	.....	.....	250	985.2	23.1	.....	77	21.77	nne.	4.5	
6:56	997.6	23.8	73	nne.	4.0	141	997.6	23.8	.....	73	21.53	nne.	4.0	9/10 St., w.

October 13, 1918.

P. M.														
12:42	1,000.0	26.4	59	n.	5.4	141	1,000.0	26.4	.....	59	20.31	n.	5.4	5/10 A.St., ne.; 4/10 Cu., ne.; 1/10 Cu. Nb., n.
.....	.....	.....	.....	.....	.....	250	987.3	25.2	.....	63	20.20	n.	5.7	
.....	.....	.....	.....	.....	.....	500	959.2	22.3	.....	71	19.12	nne.	6.4	
12:54	999.7	26.2	58	ne.	4.9	542	955.2	21.8	1.15	72	18.81	ne.	6.5	6/10 A.St., ne.; 3/10 Cu., ne.; 1/10 Cu. Nb., n.
.....	.....	.....	.....	.....	.....	750	931.9	19.4	.....	77	17.35	ne.	5.8	
1:25	999.6	23.6	69	ne.	6.3	999	905.4	16.5	1.15	83	15.58	ne.	5.0	
.....	.....	.....	.....	.....	.....	1,250	879.0	15.1	.....	80	13.73	ne.	5.1	
.....	.....	.....	.....	.....	.....	1,500	853.5	13.6	.....	78	12.15	ne.	5.3	
2:03	999.6	23.6	58	ne.	4.0	1,550	848.4	13.3	0.50	77	11.76	ne.	5.3	
.....	.....	.....	.....	.....	.....	1,500	853.5	13.5	.....	77	11.91	ne.	5.0	
.....	.....	.....	.....	.....	.....	1,250	879.0	14.5	.....	76	12.55	ne.	3.6	
2:10	999.6	23.8	58	ne.	3.1	1,022	901.8	15.4	1.01	76	13.30	ne.	2.4	8/10 A.St., ne.
.....	.....	.....	.....	.....	.....	1,000	905.0	15.7	.....	76	13.56	ne.	2.6	
.....	.....	.....	.....	.....	.....	750	931.9	18.3	.....	71	14.93	ne.	4.1	
.....	.....	.....	.....	.....	.....	500	959.2	20.8	.....	67	16.46	ne.	5.7	
2:38	999.4	26.0	61	ne.	3.1	332	977.8	22.5	1.83	64	17.45	ne.	6.7	
.....	.....	.....	.....	.....	.....	250	987.0	24.0	.....	63	18.80	ne.	5.4	
2:46	999.4	26.0	61	ne.	3.6	141	999.4	26.0	.....	61	20.51	ne.	3.6	9/10 A.St., ne.

October 14, 1918.

A. M.														
7:23	1,003.4	17.2	87	ne.	5.4	141	1,003.4	17.2	.....	87	17.07	ne.	5.4	Cloudless.
.....	.....	.....	.....	.....	.....	250	990.7	17.8	.....	83	16.92	ne.	6.5	
.....	.....	.....	.....	.....	.....	500	962.2	19.2	.....	75	16.69	ene.	8.9	
7:32	1,003.5	17.7	86	nne.	4.9	570	954.7	19.6	−0.56	73	16.65	ene.	9.6	
.....	.....	.....	.....	.....	.....	750	935.0	18.4	.....	82	17.35	ene.	6.7	
8:26	1,004.2	19.3	78	nne.	5.8	951	914.0	17.0	0.68	92	17.83	ene.	3.5	
.....	.....	.....	.....	.....	.....	1,000	908.6	16.8	.....	90	17.22	ene.	3.7	Few Cu., ne.
.....	.....	.....	.....	.....	.....	1,250	882.0	15.5	.....	81	14.26	ene.	4.7	
.....	.....	.....	.....	.....	.....	1,500	856.0	14.2	.....	73	11.82	ene.	5.6	
.....	.....	.....	.....	.....	.....	1,750	830.8	13.0	.....	64	9.59	ene.	6.6	
.....	.....	.....	.....	.....	.....	2,000	806.3	11.7	.....	55	7.56	ene.	7.6	
.....	.....	.....	.....	.....	.....	2,250	783.2	10.5	.....	46	5.84	ene.	8.5	
.....	.....	.....	.....	.....	.....	2,500	760.4	9.2	.....	37	4.31	ene.	9.5	
.....	.....	.....	.....	.....	.....	2,750	737.8	7.9	.....	28	2.98	ene.	10.5	
9:23	1,004.4	20.6	64	ene.	5.8	2,758	737.2	7.9	0.50	*28	2.98	ene.	10.5	1/10 St.Cu., ne.
.....	.....	.....	.....	.....	.....	3,000	715.4	6.6	.....	*28	2.73	ene.	9.8	
.....	.....	.....	.....	.....	.....	3,250	694.1	5.3	.....	*28	2.49	ene.	9.0	
.....	.....	.....	.....	.....	.....	3,500	673.4	4.0	.....	*28	2.28	ne.	8.3	
.....	.....	.....	.....	.....	.....	3,750	653.5	2.6	.....	*28	2.06	ne.	7.5	
9:58	1,004.4	22.0	59	ene.	5.4	3,853	645.0	2.1	0.53	*28	1.99	ne.	7.2	2/10 St.Cu., ne.
.....	.....	.....	.....	.....	.....	4,000	633.3	1.2	.....	*28	1.86	ne.	7.6	
.....	.....	.....	.....	.....	.....	4,250	614.0	− 0.2	.....	*28	1.68	ene.	8.3	Altitude of St.Cu. base about 1,750 m.
.....	.....	.....	.....	.....	.....	4,500	595.0	− 1.8	.....	*28	1.47	ene.	9.0	
.....	.....	.....	.....	.....	.....	4,750	576.5	− 3.3	.....	*28	1.30	e.	9.7	

*Relative humidity, below 28 per cent.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 14, 1918—Continued.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:34	1,004.2	22.5	56	ene.	4.9	4,959	561.5	− 4.6	0.61	*28	1.16	e.	10.3	2/10 St.Cu., ne.
						5,000	558.0	− 4.9		*28	1.13	e.	10.2	
						5,250	540.2	− 6.8		*28	0.96	e.	9.6	1/10 St.Cu., ne.
						5,500	523.0	− 8.6		*28	0.82	ene.	9.1	
						5,750	506.3	−10.4		*28	0.70	ene.	8.5	
						6,000	491.0	−12.3		*28	0.59	ne.	8.0	
P. M.														
12:03	1,003.7	24.6	45	ene.	4.5	6,245	476.1	−14.1	0.83	*28	0.50	ne.	7.4	Cloudless.
						6,000	491.1	−11.9		*28	0.61	ne.	7.4	
						5,750	506.9	− 9.5		*28	0.76	ne.	7.5	
1:31	1,002.5	26.2	41	ne.	5.4	5,649	513.8	− 8.6	0.56	*28	0.82	ne.	7.5	
						5,500	523.0	− 7.8		*28	0.88	ne.	8.1	
						5,250	540.1	− 6.4		*28	1.00	ene.	9.2	
2:17	1,001.8	26.8	39	ne.	6.3	5,095	550.9	− 5.5	0.40	*28	1.08	ene.	9.9	
						5,000	557.8	− 5.1		*28	1.11	ene.	10.4	
						4,750	575.9	− 4.1		*28	1.21	ene.	11.8	
3:14	1,001.2	26.2	30	ne.	8.0	4,498	593.6	− 3.1	0.69	*28	1.32	ene.	13.2	
						4,250	612.7	− 1.4		28	1.52	ene.	12.6	
						4,000	632.2	0.3		29	1.81	ene.	12.0	
						3,750	652.2	2.1		29	2.06	ene.	11.3	
						3,500	672.0	3.8		30	2.41	ene.	10.7	
						3,250	692.3	5.5		30	2.71	ene.	10.1	
4:53	1,000.7	26.0	29	ene.	6.3	3,165	699.7	6.1	0.66	30	2.83	ene.	9.9	
						3,000	713.6	7.2		30	3.05	ene.	9.6	
						2,750	735.7	8.8		29	3.29	ene.	9.2	
						2,500	758.2	10.5		29	3.68	ene.	8.8	
						2,250	781.3	12.0		28	3.93	ene.	8.4	
5:57	1,001.0	23.4	37	ene.	4.9	2,098	795.8	13.1	0.45	*28	4.22	ene.	8.2	
						2,000	805.0	13.5		*28	4.33	ene.	8.3	
						1,750	829.7	14.7		*28	4.68	ene.	8.5	
						1,500	854.4	15.8		*28	5.03	ene.	8.7	
6:15	1,001.2	22.8	38	ne.	4.5	1,391	865.4	16.3	−0.49	*28	5.19	ene.	8.8	
						1,250	879.9	15.6		*28	4.96	ene.	9.1	
6:32	1,001.4	21.8	43	ne.	4.5	1,166	888.6	15.2	0.77	*28	4.84	ene.	9.2	
						1,000	906.0	16.5		31	5.82	ene.	9.3	
						750	933.0	18.4		33	6.98	ene.	9.5	
6:59	1,001.7	20.4	48	ne.	4.0	538	956.6	20.0	0.00	36	8.42	ene.	9.6	
						500	960.8	20.0		37	8.65	ene.	9.1	
						250	989.0	20.0		43	10.05	ne.	5.5	
7:07	1,001.7	20.0	46	ne.	4.0	141	1,001.7	20.0		46	10.75	ne.	4.0	Cloudless.

October 15, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:35	1,004.7	11.4	74	n.	4.9	141	1,004.7	11.4		74	9.98	n.	4.9	Few A.St., nw.
						250	992.0	12.3		69	9.87	nne.	6.2	
7:39	1,004.7	11.7	72	n.	4.9	499	962.7	14.3	−0.81	57	9.29	ne.	9.2	
						750	934.7	13.3		47	7.18	ne.	8.0	
8:00	1,004.7	12.8	69	n.	4.5	1,002	907.1	12.3	0.40	37	5.29	ene.	6.7	
						1,250	881.0	14.6		28	4.65	ne.	9.2	
8:21	1,004.7	13.5	68	nne.	4.9	1,450	860.4	16.4	−0.92	†20	3.73	nne.	11.3	
						1,500	855.4	16.2		†20	3.68	nne.	11.2	Few A.St., nw.; 1/10 Ci.St., nw.
						1,750	830.5	15.4		†20	3.50	nne.	10.5	
						2,000	806.5	14.5		†20	3.30	ne.	9.8	
						2,250	783.0	13.7		†20	3.14	ne.	9.1	
8:44	1,004.7	14.3	63	nne.	4.5	2,306	777.7	13.5	0.34	†20	3.08	ne.	9.0	
						2,500	760.0	12.0		†20	2.81	ne.	9.4	
						2,750	737.6	10.1		†20	2.47	ene.	9.9	
						3,000	716.0	8.1		†20	2.16	ene.	10.4	
9:09	1,004.8	16.0	58	ene.	5.4	3,108	708.6	7.3	0.77	†20	2.05	ene.	10.6	2/10 Ci.St., nw.
						3,250	694.7	6.4		†20	1.92	ene.	10.7	
						3,500	674.0	4.9		†20	1.73	ene.	10.9	
						3,750	653.7	3.4		†20	1.56	ene.	11.1	
						4,000	633.7	1.9		†20	1.40	ene.	11.3	
9:52	1,005.0	16.8	58	nne.	4.5	4,010	632.8	1.8	0.48	†20	1.39	ene.	11.3	
						4,000	633.7	1.8		†20	1.39	ene.	11.3	
						3,750	653.7	2.7		†20	1.48	ese.	10.9	
10:40	1,004.4	18.3	46	ne.	4.9	3,650	661.4	3.1	0.59	†20	1.53	ese.	10.7	
						3,500	673.4	4.0		†20	1.63	ese.	10.7	
						3,250	694.0	5.5		†20	1.81	ese.	10.7	
10:53	1,004.1	19.5	42	ne.	5.4	3,161	701.7	6.0	0.62	†20	1.87	ese.	10.7	
						3,000	715.3	7.0		†20	2.00	ese.	10.7	1/10 Ci.St., nw.
						2,750	737.6	8.5		†20	2.22	e.	10.7	
						2,500	760.0	10.1		†20	2.47	ene.	10.7	
11:16	1,003.9	19.5	42	nne.	6.3	2,289	779.4	11.4	0.62	†20	2.70	ene.	10.7	Few Ci.St., nw.
						2,250	783.0	11.7		†20	2.75	ene.	10.8	
						2,000	806.5	13.2		†20	3.03	ene.	11.1	
						1,750	831.0	14.8		†20	3.37	ene.	11.4	
11:45	1,003.8	21.2	37	nne.	5.4	1,599	846.3	15.7	0.03	†20	3.57	ene.	11.6	
						1,500	856.4	15.7		†20	3.57	ene.	10.7	
						1,250	882.0	15.8		†20	3.59	ene.	8.3	
11:50	1,003.7	21.6	36	nne.	7.2	‡1,224	884.6	15.8		†20	3.59	ene.	8.1	

* Relative humidity, below 28 per cent. † Relative humidity, below 20 per cent. ‡ Kites broke away.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 16, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb*		*m. p. s.*	
1:49	996.7	22.0	70	nne.	7.6	141	996.7	22.0	.....	70	18.51	nne.	7.6	10/10 St.
						250	984.1	20.6	.....	74	17.96	nne.	6.9	
2:15	996.5	22.2	66	nne.	5.8	486	957.5	17.7	1.25	84	17.01	nne.	5.3	
						500	955.8	17.6	.....	84	16.91	nne.	5.4	
						750	928.1	16.6	.....	85	16.06	ne.	6.4	
						1,000	901.5	15.5	.....	85	14.97	ene.	7.4	
						1,250	875.5	14.4	.....	86	14.10	e.	8.4	
2:46	996.4	22.8	68	n.	5.8	1,354	854.6	14.0	0.43	86	13.74	e.	8.8	
						1,500	850.0	13.1	.....	86	12.97	e.	8.8	
						1,750	824.7	11.5	.....	86	11.67	e.	8.7	
						2,000	800.5	9.9	.....	87	10.61	e.	8.7	
						2,250	777.0	8.3	.....	87	9.53	e.	8.6	
3:19	996.3	23.5	65	nne.	6.7	2,377	765.0	7.5	0.64	87	9.02	e.	8.6	
						2,500	753.7	7.0	.....	83	8.32	e.	7.4	
4:00	996.3	22.4	71	nne.	5.8	2,608	743.4	6.6	0.39	80	8.15	e.	6.3	Altitude of St.Cu. base about 3,050 m.
						2,750	731.0	6.0	.....	80	7.48	e.	6.0	
4:27	996.3	24.0	64	nne.	5.8	2,983	710.6	5.0	0.40	81	7.06	e.	5.6	8/10 St.Cu.
						2,750	731.2	5.9	.....	85	7.90	e.	8.4	2/10 St.
4:46	996.3	24.0	64	ne.	5.4	2,578	746.7	6.5	0.59	87	8.42	e.	10.4	Altitude of St.Cu. base about 3,150 m.
						2,500	754.0	7.0	.....	87	8.72	e.	10.4	
						2,250	777.0	8.4	.....	87	9.59	e.	10.4	
						2,000	800.5	9.9	.....	85	10.40	e.	10.3	
						1,750	824.7	11.4	.....	83	11.59	e.	10.3	
5:11	996.3	23.8	64	ne.	5.4	1,684	831.3	11.8	0.51	85	11.90	e.	10.3	Altitude of St. base about 1,400 m.
						1,500	850.0	12.7	.....	85	12.49	e.	9.4	
						1,250	875.7	14.0	.....	83	13.26	ene.	8.1	
						1,000	901.5	15.3	.....	82	14.25	ne.	6.8	
5:30	996.3	23.6	63	ne.	4.5	858	916.8	16.0	0.97	81	14.73	ne.	6.1	
						750	928.1	17.0	.....	78	15.12	ne.	6.1	
						500	955.8	19.5	.....	72	16.32	ne.	6.1	
5:42	996.3	23.3	60	ne.	4.9	485	957.5	19.6	1.05	72	16.42	ne.	6.1	
						250	984.0	22.2	.....	63	16.87	ne.	5.2	
5:49	996.3	23.2	60	ne.	4.9	141	996.3	23.2	.....	60	17.00	ne.	4.9	9/10 A.St., w.

October 17, 1918.

A. M.														
7:52	995.9	19.0	83	ne.	4.5	141	995.9	19.0	.....	83	18.67	ne.	4.5	10/10 St.
						250	983.4	17.7	.....	87	17.62	ne.	4.9	
8:43	995.9	19.4	79	ne.	4.9	440	961.7	15.5	1.17	91	16.03	ne.	5.7	
						500	955.3	15.5	.....	91	16.03	ne.	5.4	
9:17	996.0	19.9	84	ne.	8.5	609	943.0	15.5	0.30	91	16.03	ne.	4.8	
						500	955.3	16.2	.....	91	16.76	ne.	4.9	
9:46	996.2	20.0	82	ne.	3.6	326	975.0	17.2	1.51	90	17.66	ne.	5.0	
						250	983.9	18.4	.....	87	18.41	ne.	4.6	
9:51	996.2	20.0	82	ne.	4.0	141	996.2	20.0	.....	82	19.17	ne.	4.0	

October 21, 1918.

A. M.														
8:39	1,000.8	21.9	81	e.	4.5	141	1,000.8	21.9	.....	81	21.29	e.	4.5	10/10 A.St., w.
						250	988.8	21.6	.....	81	20.90	e.	5.9	
						500	960.6	20.9	.....	79	19.53	ese.	9.2	
8:50	1,000.8	22.4	78	ese.	4.9	600	949.3	20.6	0.28	79	19.17	ese.	10.5	9/10 A.St., w.
						750	932.9	19.6	.....	80	18.25	se.	9.3	7/10 A.St., w.
						1,000	906.0	18.0	.....	83	17.13	se.	7.1	5/10 A.St., w.
						1,250	880.0	16.4	.....	85	15.85	sse.	5.1	
11:02	1,000.0	25.0	70	sse.	4.9	1,400	864.4	15.4	0.62	86	15.05	sse.	3.8	
						1,250	880.0	16.3	.....	86	15.94	sse.	4.2	4/10 A.St., w.; 3/10 St.Cu., s.
						1,000	905.8	17.8	.....	85	17.32	sse.	5.0	
						750	931.9	19.3	.....	84	18.81	sse.	5.7	
11:41	999.6	25.3	69	sse.	3.6	626	945.6	20.0	0.12	84	19.64	sse.	6.1	
						500	959.3	21.5	.....	80	20.52	sse.	5.7	
						240	987.4	24.3	.....	71	21.58	sse.	4.9	
11:19	999.5	25.6	67	sse.	4.5	1-1	999.5	25.6	.....	67	22.00	sse.	4.5	

October 22, 1918.

A. M.														
8:00	992.2	19.4	95	sse.	3.6	141	992.2	19.4	.....	95	21.40	sse.	3.6	10/10 St., sse.
						250	979.8	18.3	.....	96	20.19	sse.	5.9	Altitude of St. base about 300 m.
						500	951.5	16.1	.....	100	18.30	sse.	11.1	
8:19	992.2	19.4	95	sse.	4.5	528	948.4	15.8	0.93	100	17.95	sse.	11.7	Light rain began 8:22 a. m. and became heavy 8:32 a. m.
						750	924.0	15.2	.....	100	17.27	sse.	12.4	
8:32	992.2	19.4	96	sse.	4.5	*765	922.6	15.2	0.25	100	17.27	sse.	12.4	10/10 St., sse.

October 23, 1918.

P. M.														
2:50	992.0	21.7	69	nw.	7.2	141	992.0	21.7	.....	69	17.91	nw.	7.2	Thunderstorm in n.
						250	979.9	20.7	.....	72	17.58	nw.	6.6	4/10 A.St., w.; 2/10 Cu., w.; 1/10 Cu.Nb., w.
2:54	991.9	21.9	68	nw.	7.6	465	955.3	18.7	0.93	77	16.61	wnw.	5.4	3/10 A.St., w.; 2/10 Cu., w.; 2/10 Cu.Nb., w.; rainbow in ne.
						500	951.8	18.4	.....	77	16.29	wnw.	5.4	
						750	924.0	16.2	.....	79	14.55	wnw.	5.1	Rainbow with secondary bow at 3:16 p. m.
						1,000	897.6	14.0	.....	82	13.10	wnw.	4.8	Rainbow ended at 3:27 p. m.

*Kites broke away.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 23, 1918—Continued.

Surface.						At different heights above sea.									
Time.	Pressure	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
3:44	992.1	22.3	63	nw.	6.3	1,045	872.8	13.6	0.88	82	12.78	wnw.	4.8	
						1,250	871.3	12.2		82	11.65	wnw.	4.8	
						1,500	845.9	10.5		80	10.16	nw.	4.8	
						1,750	821.3	8.8		79	8.95	nw.	4.8	Thunderstorm in nw.; weather threatening.
4:10	992.2	22.7	63	n.	4.9	1,913	805.1	7.7	0.67	78	8.20	nw.	4.8	
						1,750	821.3	8.8		78	8.84	nw.	4.7	2/10 Cu.Nb., nw.; 5/10 Cu., nw.
						1,500	845.9	10.5		78	9.91	nnw.	4.6	Altitude of Cu. base about 1,250 m.
						1,250	871.3	12.1		78	11.01	nnw.	4.5	
4:30	992.4	20.8	76	n.	6.7	1,131	883.8	12.9	0.69	78	11.61	nnw.	4.5	Light rain began 4:35, ended 4:51 p. m.
						1,000	897.6	13.8		78	12.31	nnw.	5.1	
						750	924.1	15.5		77	13.56	nnw.	6.3	Thunder in w. 4:44 p. m. Complete rainbow
4:46	992.4	19.8	85	n.	7.6	535	947.8	17.0	0.61	77	14.92	nnw.	7.3	
						500	952.0	17.2		77	15.11	nnw.	7.3	
						250	980.1	18.7		81	17.47	n.	7.2	
4:53	992.5	19.4	82	n.	7.2	141	992.5	19.4		82	18.47	n.	7.2	5/10 A.St., nw.; 2/10 Cu., nw.; 1/10 Cu.Nb., nw.

October 24, 1918.

A. M.														
7:11	996.7	17.3	91	nnw.	3.6	141	996.7	17.3		91	17.97	nnw.	3.6	8/10 St.Cu., nnw.
						250	984.0	16.6		91	17.19	nnw.	5.4	
						500	955.4	14.8		88	14.81	n.	9.6	Altitude of St.Cu. base about 550 m.
7:18	996.7	17.4	91	nw.	3.6	507	954.7	14.8	0.68	88	14.81	n.	9.7	
						750	927.3	12.9		90	13.39	n.	8.3	
						1,000	900.3	11.0		91	11.95	n.	6.8	
7:46	996.8	17.5	92	nnw.	4.0	1,146	885.0	9.9	0.77	93	11.35	n.	5.9	Altitude of St.Cu. base about 1,100 m.
						1,250	874.3	13.1		80	12.06	n.	5.7	
7:51	996.9	17.6	90	nnw.	4.5	1,268	872.5	13.7	−3.12	78	12.23	n.	5.7	Few Cl., n.; few A.St., n.; 7/10 St.Cu., nw.
						1,500	849.0	12.8		79	11.68	nnw.	3.4	
9:20	997.8	18.2	87	nw.	3.6	1,586	840.7	12.4	−0.21	80	11.52	nnw.	2.6	1/10 A.St., n.; 8/10 St.Cu., nnw.; 1/10 St., nnw
						1,500	849.2	11.7		83	11.41	nnw.	2.7	
9:23	997.9	18.2	87	nw.	4.9	1,311	868.9	10.1	0.53	91	11.25	nnw.	2.8	
						1,250	875.7	10.4		91	11.48	nnw.	3.1	
						1,000	902.2	11.7		89	12.24	nnw.	4.5	
						750	929.3	13.1		87	13.12	nnw.	5.9	Altitude of St.Cu. base about 650 m.
10:17	998.3	18.6	83	nnw.	3.6	538	952.8	14.2	1.13	86	13.92	nnw.	7.1	
						500	957.2	14.6		88	14.29	nnw.	6.7	
						250	986.0	17.5		84	16.80	nnw.	4.2	
10:23	998.3	18.7	83	nnw.	3.1	141	998.3	18.7		83	17.90	nnw.	3.1	10/10 St., nnw.

October 25, 1918.

A. M.														
11:48	995.0	21.7	67	s.	8.0	141	995.0	21.7		67	17.39	s.	8.0	5/10 St.Cu., s.
						250	983.0	20.7		70	17.09	s.	7.4	
						500	954.9	18.4		76	16.06	s.	5.9	
P. M.														
12:08	994.8	22.4	65	s.	6.7	625	940.5	17.2	0.93	79	15.50	s.	5.2	
						750	923.6	16.6		79	14.92	ssw.	5.5	Altitude of St.Cu. base about 1,100 m.
						1,000	898.7	15.4		79	13.82	sw.	6.2	
3:03	992.5	24.4	59	ese.	5.4	1,116	885.8	14.9	0.47	79	13.38	sw.	6.5	4/10 St.Cu., s.
3:07	992.5	24.4	59	ese.	5.4	1,134	884.0	16.0	−6.11	84	15.27	sw.	6.5	
						1,250	871.5	15.4		82	14.35	sw.	7.0	Altitude of St.Cu. base about 1,200 m.
						1,500	846.0	14.1		77	12.39	sw.	8.2	1/10 Cl., s.; 1/10 St.Cu., s.
						1,750	821.9	12.8		72	10.64	sw.	9.3	
						2,000	798.3	11.5		68	9.23	sw.	10.5	
4:11	992.9	24.2	62	se.	8.5	2,248	774.8	10.2	0.52	63	7.84	sw.	11.6	
						2,500	751.5	8.4		64	7.05	sw.	11.5	
						2,750	729.0	6.7		65	6.38	sw.	11.4	
						3,000	707.2	5.0		66	5.76	wsw.	11.3	
						3,250	685.0	3.2		67	5.15	wsw.	11.2	
4:22	992.9	24.2	62	se.	7.6	3,310	681.1	2.8	0.64	67	5.00	wsw.	11.1	
						3,250	685.0	3.2		68	5.23	wsw.	11.1	
						3,000	707.2	4.6		71	6.02	wsw.	11.0	
						2,750	729.0	6.1		74	6.97	wsw.	10.9	
						2,500	751.5	7.6		78	8.14	sw.	10.8	
						2,250	774.8	9.0		81	9.30	sw.	10.7	
4:41	992.9	23.9	64	se.	6.3	2,031	795.1	10.3	0.60	84	10.53	sw.	10.6	Few A.Cu., s.; 1/10 Cl.St., s.; 3/10 St.Cu., s.
						2,000	798.3	10.5		84	10.67	sw.	10.5	
						1,750	821.9	12.0		84	11.79	sw.	9.4	
						1,500	846.2	13.5		84	12.99	ssw.	8.4	
5:07	992.9	23.2	65	s.	5.4	1,313	830.9	14.3	−0.48	84	13.69	ssw.	7.8	1/10 Cl., s.; 2/10 A.Cu., s.; 3/10 St.Cu., s.
						1,250	872.2	13.8		83	13.10	ssw.	8.4	
5:09	992.9	23.1	66	s.	5.4	1,155	882.2	13.3	0.98	82	12.52	ssw.	8.9	
						1,000	898.7	11.8		80	11.07	ssw.	9.1	
						750	925.1	17.3		77	15.21	ssw.	9.3	
5:23	993.0	22.8	68	sse.	5.8	560	946.1	19.1	0.84	74	16.33	ssw.	9.5	2/10 Cl.St., s.; 4/10 St.Cu., s.
						500	952.9	19.6		73	16.65	ssw.	8.8	
						250	981.0	21.7		71	18.43	s.	6.1	
5:37	993.1	22.6	70	sse.	4.9	141	993.1	22.6		70	19.20	sse.	4.9	

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 26, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
6:58	989.5	18.7	96	se.	7.2	141	989.5	18.7	.....	93	20.71	se.	7.2	10/10 St., se.; misting throughout flight.
						250	977.0	18.4	.....	95	20.10	sse.	11.0	
						500	948.3	17.6	.....	95	18.72	s.	19.8	Altitude of St. base about 350 m.
7:10	989.4	19.0	94	se.	7.6	537	944.7	17.5	0.30	93	18.60	s.	21.1	
						750	921.0	16.4	.....	93	17.34	s.	20.8	
						1,000	894.4	15.2	.....	93	16.03	ssw.	20.5	
						1,250	868.8	13.9	.....	93	14.77	ssw.	20.2	
7:27	989.2	19.1	95	se.	8.5	1,273	866.6	13.8	0.50	93	14.68	ssw.	20.2	
						1,500	843.3	12.8	.....	94	13.89	ssw.	20.5	
						1,750	818.7	11.7	.....	95	13.06	ssw.	20.8	
7:50	988.9	19.4	94	se.	8.5	1,884	805.7	11.1	0.49	95	12.55	ssw.	21.0	
						1,750	818.7	11.8	.....	95	13.15	ssw.	20.8	
						1,500	843.3	13.1	.....	95	14.48	s.	20.4	
						1,250	868.8	14.5	.....	97	16.01	s.	20.1	
						1,000	894.4	15.8	.....	98	17.59	s.	19.7	
						750	921.0	17.1	.....	99	19.30	sse.	19.3	
9:14	988.4	20.7	91	se.	8.9	531	944.7	18.3	0.56	100	21.03	sse.	19.0	
						500	948.3	18.5	.....	100	21.30	sse.	18.1	
						250	976.3	19.9	.....	96	22.31	se.	11.1	
9:37	988.3	20.5	94	se.	8.0	141	988.3	20.5	.....	94	22.67	se.	8.0	Overcast.

October 27, 1918.

A. M.														
7:11	997.0	6.8	77	w.	6.3	141	997.0	6.8	.....	77	7.61	w.	6.3	9/10 St., nw.
						250	983.8	5.6	.....	78	7.10	wnw.	8.3	
						500	953.9	2.9	.....	80	6.02	nw.	13.1	
7:23	997.2	6.9	80	w.	6.3	529	950.9	2.6	1.08	80	5.90	nw.	13.6	
						750	924.7	0.7	.....	83	5.34	nw.	14.0	
						1,000	896.6	−1.4	.....	87	4.73	nw.	14.5	Altitude of St. base about 900 m.
7:44	997.4	7.1	79	nw.	8.5	1,123	883.2	−2.4	0.84	89	4.45	nw.	14.7	8/10 St., nw.
						1,250	869.3	0.1	.....	84	5.17	nw.	14.5	
						1,500	843.0	5.2	.....	73	6.46	nw.	14.0	
7:50	997.5	7.2	78	nw.	6.7	1,522	840.8	5.6	−2.01	72	6.55	nw.	14.0	
						1,750	817.4	5.0	.....	66	5.76	nw.	15.4	
						2,000	792.9	4.3	.....	60	4.99	nw.	17.1	
						2,250	769.2	3.6	.....	54	4.27	nw.	18.6	10/10 St., nw.
8:19	997.6	7.4	75	nw.	5.8	2,305	764.1	3.5	0.27	53	4.16	nw.	19.0	
						2,500	745.8	2.7	.....	45	3.34	nw.	.....	
						2,750	723.4	1.6	.....	35	2.40	nw.	.....	
						3,000	701.3	0.5	.....	24	1.52	wnw.	.....	
						3,250	679.8	−0.5	.....	14	0.82	wnw.	.....	
9:10	997.6	8.0	74	nw.	7.6	3,335	672.6	−0.9	0.40	10	0.57	wnw.	(*)	Altitude of St. base about 900 m.
						3,250	679.8	−0.6	.....	13	0.76	wnw.	.....	
						3,000	701.3	0.3	.....	22	1.37	wnw.	.....	
						2,750	723.4	1.3	.....	32	2.15	wnw.	.....	
						2,500	745.1	2.2	.....	42	3.01	wnw.	.....	
10:07	997.9	9.0	70	nw.	7.2	2,315	764.1	2.9	0.39	48	3.61	wnw.	(*)	9/10 St., nw.
						2,250	770.0	3.1	.....	49	3.74	wnw.	.....	
						2,000	794.0	4.1	.....	55	4.50	wnw.	.....	
						1,750	818.6	5.1	.....	61	5.36	wnw.	.....	
						1,500	844.3	6.1	.....	67	6.31	wnw.	.....	
10:43	997.9	10.0	70	nw.	8.5	1,286	867.2	6.7	−3.62	71	6.97	wnw.	16.6	
						1,250	870.9	5.4	.....	73	6.55	wnw.	15.7	
10:48	997.9	10.0	69	nw.	11.2	1,137	883.2	1.3	0.63	79	5.30	wnw.	12.7	
						1,000	898.2	2.1	.....	78	5.55	wnw.	11.8	
						750	926.0	3.7	.....	77	6.13	nw.	10.0	
11:07	997.9	10.5	66	nw.	8.5	522	952.7	5.2	1.47	75	6.64	nw.	8.4	
						500	955.0	5.5	.....	75	6.77	nw.	8.4	
						250	984.9	9.2	.....	69	8.03	nw.	8.8	
11:18	997.9	10.8	67	nw.	8.9	141	997.9	10.8	.....	67	8.08	nw.	8.9	3/10 St., nw.

October 28, 1918, series (No. 1).

A. M.														
7:08	993.2	8.3	74	s.	4.5	141	993.2	8.3	.....	74	8.10	s.	4.5	Few A.St., e.
						250	980.3	9.4	.....	60	7.07	s.	9.4	
						500	951.3	11.2	.....	35	4.79	ssw.	15.8	
7:19	993.2	8.6	75	s.	4.0	531	947.7	11.5	−0.82	33	4.48	ssw.	18.4	
						750	923.0	10.9	.....	31	4.04	ssw.	17.1	
						1,000	895.9	10.2	.....	28	3.49	ssw.	15.7	
7:39	993.2	9.3	72	s.	4.9	1,247	869.6	9.5	0.28	25	2.97	ssw.	14.3	
						1,500	843.3	7.8	.....	26	2.75	sw.	12.9	
						1,750	818.4	6.2	.....	27	2.55	sw.	11.6	
8:05	993.2	10.8	67	s.	4.9	1,953	798.5	4.8	0.67	28	2.41	wsw.	10.5	
						2,000	793.9	4.7	.....	27	2.31	wsw.	.....	
						2,250	769.7	3.9	.....	23	1.86	wsw.	.....	
						2,500	746.1	3.2	.....	18	1.38	sw.	.....	
						2,750	723.9	2.5	.....	13	0.95	sw.	.....	
8:27	993.1	11.4	64	s.	5.8	2,992	702.4	†1.8	0.36	9	0.63	sw.	(‡)	
						2,750	723.9	2.9	.....	11	0.83	sw.	.....	
						2,500	746.1	4.0	.....	14	1.14	sw.	.....	
						2,250	769.7	5.0	.....	16	1.40	ssw.	.....	
						2,000	793.9	6.1	.....	19	1.79	ssw.	.....	
9:30	992.9	15.0	51	sse.	11.6	1,761	817.2	7.2	0.37	21	2.13	ssw.	(‡)	
						1,750	818.4	7.2	.....	21	2.13	ssw.	.....	
						1,500	843.3	8.1	.....	22	2.38	ssw.	.....	
						1,250	869.3	9.0	.....	23	2.64	ssw.	.....	

* Anemometer did not record. † Estimated. ‡ Instrument did not record.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 28, 1918, series (No. 1)—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.	
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.		
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.		
						1,000	895.9	9.9		25	3.05	ssw.			
						750	923.3	10.8		26	3.37	ssw.			
9:53	992.9	16.0	48	s.	11.6	507	943.9	11.6	1.15	27	3.69	ssw.	17.2		
						500	951.3	12.4		30	4.32	ssw.	15.6		
						250	980.2	15.2		41	7.08	s.	9.8		
10:19	992.9	16.5	46	sse.	7.2	141	992.9	16.5		46	8.63	sse.	7.2	3/10 A.St.	
October 28, 1918, series (No. 2).															
A. M.															
10:57	992.2	18.0	43	s.	10.7	141	992.2	18.0		43	8.88	s.	10.7	Few A.St., e.	
						250	979.7	16.8		42	8.03	s.	11.3		
						500	951.0	14.2		39	6.31	ssw.	12.8		
11:07	992.2	18.3	38	ssw.	10.7	534	947.3	13.8	4.07	39	6.15	ssw.	13.0		
						750	923.1	12.8		34	5.03	ssw.	14.9		
11:18	992.1	18.5	39	ssw.	11.6	950	901.4	11.8	0.48	29	4.01	ssw.	16.6		
						1,000	895.9	11.9		29	4.04	ssw.	17.1		
						1,250	809.8	12.3		27	3.86	sw.	19.8		
11:30	992.0	18.8	39	ssw.	12.5	1,376	856.8	12.5	−0.16	26	3.77	sw.	21.1		
						1,500	844.0	11.5		29	3.94	sw.	21.1		
						1,750	818.0	9.4		34	4.01	sw.	21.1		
						2,000	794.7	7.2		40	4.06	sw.	21.1		
11:57	991.9	19.3	42	s.	11.2	2,091	786.1	6.5	0.84	42	4.07	sw.	21.1		
						2,250	771.0	7.7		34	3.57	sw.	21.1		
P. M.															
12:10	991.6	19.5	37	sse.	13.0	2,485	749.3	9.4	−0.74	23	2.71	wsw.	21.1		
						2,500	747.5	9.3		23	2.70	wsw.	21.0		
						2,750	725.3	8.0		17	1.82	wsw.	19.6		
12:23	991.2	19.7	38	sse.	12.5	2,835	718.1	7.6	0.42	15	1.57	wsw.	19.1		
						2,750	725.3	7.9		14	1.49	wsw.	19.0		
						2,500	747.5	8.7		11	1.24	wsw.	18.9		
1:03	990.1	20.5	36	s.	12.5	2,349	761.0	9.2	−4.36	9	1.05	wsw.	18.8		
1:06	990.0	20.5	36	s.	12.5	2,294	766.0	6.8	0.54	10	0.99	wsw.	18.8		
						2,250	770.0	7.0		11	1.10	wsw.	19.1		
						2,000	793.6	8.4		17	1.87	wsw.	20.8		
						1,750	817.6	9.8		24	2.91	sw.	22.5		
						1,500	842.0	11.1		30	3.96	sw.	24.3		
1:56	988.0	21.3	33	sso.	12.5	1,204	865.6	12.4	−1.12	36	5.18	sw.	25.9		
						1,250	867.0	12.2		35	4.97	sw.	25.8		
2:05	987.8	21.0	34	sse.	12.1	1,175	874.5	11.4	0.84	32	4.31	sw.	25.5		
						1,000	892.9	12.9		33	4.91	sw.	21.8		
						750	919.7	15.0		35	5.97	ssw.	16.4		
2:28	987.7	21.1	32	s.	12.5	533	943.6	16.8	1.10	36	6.89	ssw.	11.8		
						500	947.0	17.2		36	7.06	ssw.	11.8		
						250	975.0	19.9		35	7.90	s.	11.7		
2:36	987.6	21.1	34	s.	11.6	141	987.6	21.1		34	8.51	s.	11.6	Cloudless.	
October 28, 1918, series (No. 3).															
P. M.															
3:11	987.4	21.1	33	s.	13.4	141	987.4	21.1		33	8.26	s.	13.4	Few A.St., sw.	
						250	974.8	19.8		34	7.85	s.	13.3		
						500	946.8	16.8		38	7.27	s.	13.1		
3:16	987.3	21.1	33	s.	13.4	512	945.5	16.7	1.19	38	7.22	s.	13.1		
						750	919.0	15.0		47	8.01	ssw.	14.1		
						1,000	892.6	13.2		55	8.34	ssw.	15.1		
3:40	987.0	21.2	39	s.	13.0	1,184	873.1	11.9	0.71	62	8.64	sw.	15.8		
						1,250	866.4	12.7		60	8.81	sw.	16.5		
3:44	987.0	21.2	39	s.	11.2	1,356	855.5	14.0	−1.22	55	8.95	sw.	17.5		
						1,500	841.1	13.5		50	7.74	sw.	17.6		
						1,750	816.0	12.5		40	5.80	sw.	17.9		
						2,000	792.0	11.6		30	4.10	wsw.	18.2		
4:12	986.7	21.2	40	s.	10.7	2,234	770.1	10.7	0.38	21	2.70	wsw.	18.4		
						2,250	768.8	10.6		21	2.68	wsw.	18.6		
						2,500	745.7	8.6		27	3.02	wsw.	21.6		
						2,750	723.7	6.5		32	3.10	wsw.	24.7		
4:54	986.2	21.0	51	s.	8.9	2,892	711.0	5.4	0.74	35	3.14	wsw.	26.4		
						2,750	723.7	6.4		35	3.36	wsw.	24.6		
						2,500	745.7	8.1		35	3.78	wsw.	21.6		
						2,250	768.8	9.8		35	4.24	wsw.	18.5		
6:22	987.1	18.7	68	s.	7.2	2,143	778.5	10.5	0.73	35	4.44	wsw.	17.2		
						2,000	792.0	11.6		33	4.51	wsw.	16.7		
						1,750	816.0	13.4		31	4.76	wsw.	15.8		
7:05	987.5	17.4	73	s.	4.0	1,327	838.0	15.0	−1.39	28	4.77	wsw.	15.0		
						1,500	840.8	14.6		31	5.15	wsw.	15.0		
						1,250	866.4	11.2		60	7.98	wsw.	14.8		
7:13	987.6	17.2	71	s.	4.5	1,217	869.6	10.7	0.65	64	8.24	wsw.	14.8		
						1,000	892.6	12.1		65	9.18	sw.	14.2		
						750	919.0	13.7		66	10.35	sw.	13.5		
						500	946.8	15.3		67	11.64	sw.	12.7		
7:40	987.9	16.4	74	s.	4.9	381	960.4	16.1	0.08	67	12.26	sw.	12.4		
						250	975.0	16.2		72	13.26	s.	8.6		
7:45	987.9	16.2	76	s.	5.4	141	987.9	16.2		76	14.00	s.	5.4	Cloudless.	

TABLE 15.—*Free-air data from kite flights at Groesbeek Aerological Station, October, 1918*—Continued.

October 28, 1918, series (No. 4).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		m. p. s.	m.	*mb.*	°C.		%	*mb.*		m. p. s.	
8:38	988.4	16.0	78	s.	4.0	141	988.4	16.0	.....	78	14.18	s.	4.0	Cloudless.
						250	976.0	15.7	.....	79	14.09	ssw.	8.3	
8:49	988.4	16.0	78	s.	4.0	504	947.0	15.0	0.28	80	13.64	wsw.	18.3	
						750	920.0	13.6	.....	82	12.78	wsw.	18.3	
9:10	988.5	16.0	79	s.	4.0	1,000	894.0	12.2	.....	85	12.08	wsw.	18.2	
9:18	988.6	15.7	80	s.	4.0	1,225	870.9	10.9	0.57	87	11.34	wsw.	18.2	
						1,250	868.1	11.6	.....	79	10.79	wsw.	17.8	
						1,364	856.8	14.7	−2.73	44	7.36	wsw.	15.7	
						1,500	843.0	13.8	.....	43	6.79	wsw.	15.6	
						1,750	818.5	12.0	.....	40	5.61	wsw.	15.5	
						2,000	794.6	10.3	.....	38	4.76	wsw.	15.3	
9:51	988.8	15.4	83	ssw.	5.4	2,191	776.3	9.0	0.69	36	4.13	wsw.	15.2	
						2,250	771.0	8.5	.....	37	4.11	wsw.	15.1	
						2,500	747.5	6.4	.....	39	3.75	wsw.	14.8	
10:15	988.8	15.1	85	ssw.	3.6	2,692	729.9	4.7	0.86	41	3.50	wsw.	14.6	
						2,500	747.5	6.4	.....	40	3.84	wsw.	13.9	
						2,250	771.0	8.5	.....	39	4.33	wsw.	12.9	
						2,000	794.6	10.7	.....	38	4.89	wsw.	12.0	
						1,750	818.5	12.8	.....	37	5.47	wsw.	11.1	
10:51	988.8	15.0	88	ssw.	4.0	1,680	825.5	13.4	0.64	37	5.69	wsw.	10.8	
						1,500	843.0	14.6	.....	37	6.15	wsw.	11.1	
						1,250	867.8	16.2	.....	37	6.82	wsw.	11.4	
11:15	988.8	14.7	87	ssw.	4.5	1,182	874.5	16.6	−1.44	37	6.99	wsw.	11.5	
						1,000	893.7	14.0	.....	63	10.07	wsw.	15.4	
11:20	988.8	14.4	88	ssw.	4.9	950	897.7	13.4	0.60	69	10.61	wsw.	16.3	
						750	920.0	14.7	.....	76	12.71	wsw.	16.6	
11:37	988.8	14.4	88	ssw.	4.9	507	947.0	16.1	−0.49	85	15.56	sw.	17.0	
						500	947.7	16.1	.....	85	15.56	sw.	16.8	
						250	976.0	14.8	.....	88	14.81	ssw.	8.2	
11:44	988.8	14.3	89	ssw.	4.5	141	988.8	14.3	.....	89	14.51	ssw.	4.5	Cloudless.

October 29, 1918, series (No. 5).

A. M.														
12:27	988.8	14.6	90	s.	4.5	141	988.8	14.6	.....	90	14.96	s.	4.5	Cloudless.
						250	976.8	15.0	.....	92	15.69	ssw.	9.1	
12:38	988.8	14.7	90	s.	4.5	469	951.3	15.7	−0.34	96	17.13	sw.	18.4	
						500	948.2	15.6	.....	93	16.83	sw.	18.4	
						750	920.7	14.9	.....	86	14.57	sw.	18.3	
12:48	988.8	14.9	90	s.	4.5	804	914.5	14.6	0.33	82	13.63	sw.	18.2	
						1,000	893.8	16.2	.....	54	9.95	sw.	13.9	
1:14	988.8	14.9	90	sse.	4.0	1,213	871.5	17.9	−0.81	35	7.18	sw.	9.2	
						1,250	867.7	17.6	.....	35	7.05	sw.	9.1	
						1,500	842.6	15.5	.....	36	6.34	sw.	8.4	
1:55	988.8	14.7	91	ssw.	3.6	1,702	822.7	13.7	0.86	36	5.64	sw.	7.8	
						1,750	818.0	13.3	.....	37	5.65	sw.	8.2	
						2,000	794.0	10.9	.....	40	5.22	sw.	10.2	
						2,250	770.7	8.5	.....	43	4.77	sw.	12.2	
2:07	988.8	14.3	93	ssw.	2.2	2,467	750.4	6.5	0.64	46	4.45	sw.	14.0	Lightning in e.: 2:15 a. m.
						2,250	770.7	8.0	.....	48	5.15	sw.	14.0	Lightning in se.: 2:22 a. m.
						2,000	794.0	9.7	.....	50	6.02	sw.	14.0	
						1,750	818.0	11.5	.....	52	7.06	wsw.	14.0	
2:47	989.0	13.7	95	s.	4.0	1,614	831.3	12.5	0.58	53	7.08	wsw.	14.0	
						1,500	842.6	13.2	.....	53	8.04	wsw.	13.7	
						1,250	867.7	14.6	.....	54	8.97	wsw.	13.1	
						1,000	893.8	16.1	.....	55	10.06	wsw.	12.4	
3:39	989.1	13.9	94	sse.	2.2	875	907.3	16.8	−0.76	55	10.52	wsw.	12.1	
3:49	989.1	14.0	92	sse.	1.3	757	920.0	15.9	0.28	78	14.09	sw.	12.0	
						750	920.7	15.9	.....	78	14.09	sw.	12.0	
						500	948.2	16.6	.....	91	17.19	sw.	12.4	
3:59	989.1	13.4	94	sse.	1.3	439	955.0	16.8	−1.28	94	17.98	sw.	12.5	
						250	977.0	14.4	.....	96	15.74	s.	5.3	
4:04	989.1	13.0	97	sse.	1.3	141	989.1	13.0	.....	97	14.53	sse.	1.3	Cloudless.

October 29, 1918, series (No. 6).

A. M.														
6:20	989.1	12.5	100	s.	3.6	141	989.1	12.5	.....	100	14.49	s.	3.6	Cloudless; lightning in e. and se.
6:25	989.1	12.6	100	s.	2.2	250	977.0	14.1	.....	97	15.61	ssw.	.....	
						492	949.0	17.6	−1.45	90	18.12	w.	(*)	Few Cu., sw.
						500	948.4	17.6	.....	90	18.12	w.	.....	
						750	921.0	16.7	.....	76	15.39	w.	.....	Few A.St., w.; few Cu., sw; ground fog.
						1,000	895.0	15.8	.....	63	11.31	wnw.	.....	
						1,250	869.1	14.9	.....	50	8.47	wnw.	.....	
8:52	990.5	17.4	78	ssw.	4.0	1,358	858.4	14.5	0.40	44	7.26	wnw.	(*)	
						1,250	869.1	15.0	.....	45	7.67	wnw.	.....	3/10 Cl.St., nw.
						1,000	895.0	16.1	.....	48	8.78	nw.	.....	
9:40	990.3	17.9	71	wnw.	4.5	773	919.4	17.1	−1.45	51	9.94	nw.	(*)	
						750	922.0	16.8	.....	52	9.95	nw.	.....	
9:42	990.3	17.9	71	wnw.	4.5	587	939.7	14.4	0.81	60	9.84	nw.	(*)	
						500	949.3	15.1	.....	62	10.64	nw.	.....	
						250	977.0	17.3	.....	68	13.43	nw.	.....	
9:46	990.3	18.0	70	nw.	5.4	141	990.3	18.0	.....	70	14.45	nw.	5.4	Few Cl.St., nw.

* Anemometer did not record.

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 29, 1918, series (No. 7).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
10:31	990.0	19.3	66	nnw.	5.4	141	990.6	19.3	.....	66	14.78	nne.	5.4	Cloudless.
						250	978.0	18.4	.....	67	14.18	nne.	5.5	
						500	949.8	16.4	.....	69	12.87	n.	5.6	
10:53	989.8	19.7	64	nnw.	5.8	705	926.6	14.8	0.80	71	11.95	nnw.	5.8	
						750	922.3	15.2	.....	66	11.40	nnw.	5.7	
11:03	989.8	19.9	*61	nnw.	5.4	926	902.8	17.0	−1.00	48	9.30	nnw.	5.5	
						1,000	895.1	16.6	.....	48	9.07	nnw.	5.5	
						1,250	869.0	15.0	.....	49	8.35	nnw.	5.4	
						1,500	843.0	13.5	.....	50	7.74	nnw.	5.3	
						1,750	818.3	12.0	.....	51	7.16	nnw.	5.3	
						2,000	795.3	10.5	.....	52	6.60	nw.	5.3	
						2,250	771.8	9.0	.....	53	6.08	nw.	5.2	
P. M.														
12:43	989.6	20.8	56	nnw.	7.6	2,351	762.2	8.4	0.60	53	5.84	nw.	5.2	
						2,500	748.5	7.2	.....	53	5.35	nw.	5.3	
						2,750	725.8	5.1	.....	53	4.66	nw.	7.3	
						3,000	703.5	3.0	.....	54	4.09	nw.	8.6	
						3,250	682.0	1.0	.....	54	3.55	nw.	10.0	
12:51	989.5	20.8	54	nnw.	7.6	3,270	680.3	0.8	0.72	54	3.49	nw.	10.1	
						3,250	682.0	0.9	.....	54	3.52	nw.	10.1	
						3,000	703.5	2.5	.....	54	3.98	nw.	9.0	
						2,750	725.0	4.0	.....	53	4.31	nw.	8.0	
						2,500	747.5	5.6	.....	53	4.82	nw.	7.0	
						2,250	770.5	7.1	.....	52	5.25	nw.	6.0	
1:24	989.2	21.8	53	nnw.	8.9	2,154	779.0	7.7	0.61	52	5.47	nw.	5.6	2/10 A.Cu., nnw.
						2,000	794.2	8.6	.....	51	5.70	nw.	5.9	
						1,750	819.3	10.2	.....	49	6.10	nw.	6.3	
						1,500	843.9	11.7	.....	47	6.46	nnw.	6.7	
						1,250	868.0	13.2	.....	45	6.83	nnw.	7.1	
1:52	988.9	21.1	50	nnw.	9.8	1,155	877.7	13.8	−0.23	44	6.94	nnw.	7.3	
						1,000	893.9	13.4	.....	52	7.99	nnw.	7.2	
2:02	988.8	21.2	45	nnw.	8.9	899	904.6	13.2	1.03	57	8.65	nnw.	7.0	
						750	921.1	14.7	.....	57	9.54	nnw.	7.6	
2:18	988.9	20.8	47	nnw.	9.8	580	939.5	16.5	0.96	56	10.51	nnw.	8.2	
						500	948.7	17.3	.....	54	10.66	nnw.	8.3	
						250	976.7	19.7	.....	48	11.02	nnw.	8.7	
2:25	988.9	20.7	46	nnw.	8.9	141	988.9	20.7	.....	46	11.23	nnw.	8.9	

October 29, 1918, series (No. 8).

P. M.														
3:01	989.2	20.5	50	nnw.	2.7	141	989.2	20.5	.....	50	12.06	nnw.	2.7	3/10 A.Cu., sw.
						250	977.0	19.1	.....	49	10.83	nnw.	5.6	
						510	949.0	16.1	.....	48	8.78	nnw.	12.4	
3:10	989.3	20.0	51	nnw.	8.9	521	946.3	15.8	1.21	48	8.62	nnw.	13.0	
						750	921.7	14.3	.....	47	7.66	nnw.	12.2	6/10 A.Cu., sw.
						1,000	894.7	12.6	.....	46	6.71	nnw.	11.3	
						1,250	868.5	11.0	.....	45	5.91	nnw.	10.5	
3:40	990.0	20.0	50	nnw.	6.3	1,493	843.2	9.3	0.67	44	5.16	nnw.	9.6	
						1,750	818.8	7.9	.....	45	4.79	nnw.	9.6	
						2,000	794.0	6.4	.....	47	4.52	nw.	9.5	
						2,250	770.4	5.2	.....	48	4.25	nw.	9.4	
						2,500	747.3	3.8	.....	48	3.85	wnw.	9.4	
						2,750	724.8	2.5	.....	49	3.58	wnw.	9.4	
4:30	990.9	19.0	53	nnw.	8.9	2,705	723.0	2.4	0.54	50	3.63	wnw.	9.4	Parhelion 23½° w. of sun at 4:59 p. m.; 4/10 A.Cu., sw.
						2,750	721.8	2.4	.....	50	3.63	wnw.	9.4	
						2,500	747.3	3.8	.....	49	3.93	wnw.	9.5	
						2,250	770.4	5.3	.....	48	4.23	wnw.	9.7	
						2,000	794.0	6.5	.....	47	4.55	wnw.	9.8	
						1,750	818.0	8.5	.....	46	5.11	wnw.	9.9	
5:12	991.5	18.8	52	nnw.	5.8	1,506	843.2	9.1	0.59	46	5.32	wnw.	10.0	
						1,500	844.1	9.1	.....	46	5.32	wnw.	10.0	
						1,250	869.8	10.6	.....	48	6.13	nw.	10.6	
						1,000	895.9	12.1	.....	49	6.92	nw.	11.3	
						750	921.2	13.6	.....	51	7.95	nnw.	12.0	
5:40	992.1	18.0	51	nnw.	5.8	591	944.4	14.7	0.76	52	8.70	nnw.	12.5	
						500	951.3	15.2	.....	52	8.98	nnw.	11.3	
						250	98\.0	17.1	.....	51	9.91	nnw.	6.5	
5:46	992.2	17.9	51	nnw.	4.0	141	992.2	17.9	.....	51	10.46	nnw.	4.0	2/10 A.Cu., sw.

October 30, 1918.

A. M.														
7:06	1,001.4	10.2	88	nw.	2.2	141	1,001.4	10.2	.....	88	10.96	nw.	2.2	Cloudless.
						251	988.8	11.0	.....	81	10.64	nw.	5.9	
7:03	1,001.4	10.3	88	nw.	2.2	387	972.3	11.9	−0.69	72	10.03	nw.	10.5	
						500	959.5	11.2	.....	71	9.44	nw.	10.7	
						750	931.3	9.7	.....	69	8.30	nnw.	11.2	
						1,000	903.9	8.1	.....	66	7.13	nnw.	11.7	
7:29	1,001.8	11.0	85	wnw.	1.8	1,035	899.9	7.9	0.62	66	7.03	nnw.	11.8	
						1,250	870.0	7.0	.....	62	6.21	nnw.	11.6	
						1,500	851.0	5.9	.....	58	5.39	nnw.	11.4	
7:37	1,002.0	11.5	81	wnw.	1.8	1,525	848.2	5.8	0.43	58	5.35	nnw.	11.4	
7:42	1,002.1	11.6	82	wnw.	1.8	1,581	844.6	6.4	−1.67	38	3.65	nnw.	14.3	
						1,750	825.5	5.5	.....	36	3.25	nnw.	15.6	
						2,000	801.0	4.4	.....	33	2.76	nnw.	17.4	

TABLE 15.—*Free-air data from kite flights at Groesbeck Aerological Station, October, 1918*—Continued.

October 30, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres. Vap.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
7:56	1,002.3	12.2	78	wnw.	3.1	2,255	776.0	3.2	0.46	30	2.31	nnw.	19.2	
						2,500	753.2	1.4		31	2.10	nnw.	18.2	
						2,750	730.0	− 0.4		32	1.89	nnw.	17.1	
						3,000	707.8	− 2.3		33	1.66	nnw.	16.0	
						3,250	686.3	− 4.1		34	1.47	nnw.	15.0	
8:28	1,002.7	13.0	75	wnw.	4.5	3,294	682.1	− 4.4	0.73	34	1.43	nnw.	14.8	
						3,500	665.0	− 5.3		32	1.25	nnw.	16.3	
						3,750	644.4	− 6.4		29	1.03	nnw.	18.1	
						4,000	624.2	− 7.0		26	0.83	nnw.	19.9	
9:10	1,003.1	14.7	67	n.	4.0	4,144	612.3	− 8.2	0.44	24	0.73	nnw.	20.9	
						4,000	624.2	− 7.0		25	0.80	nnw.	19.6	
						3,750	644.4	− 6.5		27	0.95	nnw.	17.4	
						3,500	665.0	− 5.4		30	1.16	nnw.	15.2	
						3,250	686.4	− 4.2		32	1.38	nnw.	13.0	
10:37	1,003.4	16.6	56	nnw.	6.7	3,240	687.0	− 4.2	0.61	32	1.38	nnw.	12.9	
						3,000	708.1	− 2.7		42	2.05	nnw.	12.9	
						2,750	731.0	− 1.2		52	2.88	n.	13.0	
						2,500	754.4	0.3		63	3.93	n.	13.0	
11:13	1,003.3	17.3	52	n.	8.0	2,375	765.9	1.1	0.83	68	4.50	n.	13.0	
						2,250	778.2	2.1		64	4.35	n.	12.9	
						2,000	802.2	4.2		57	4.70	n.	12.8	
						1,750	826.8	6.3		49	4.68	n.	12.7	
11:30	1,003.2	17.3	52	n.	6.7	1,539	848.2	8.0	0.16	43	4.61	n.	12.6	
						1,500	852.4	8.1		45	4.86	n.	12.3	
						1,250	878.6	8.5		55	6.10	n.	10.5	
						1,000	905.6	8.9		65	7.41	n.	8.7	
11:49	1,003.1	17.9	51	nnw.	7.2	918	914.5	9.0	0.81	68	7.81	n.	8.1	
						750	933.3	10.4		67	8.45	n.	7.7	
						500	961.5	12.4		65	9.36	nnw.	7.1	
P. M.														
12:01	1,003.0	18.0	51	nnw.	6.7	436	968.6	12.9	1.86	64	9.52	nnw.	6.9	
						250	990.6	16.4		56	10.44	nnw.	6.5	
12:03	1,002.9	18.4	51	nnw.	6.3	141	1,002.9	18.4		51	10.79	nnw.	6.3	Cloudless.

October 31, 1918.

A. M.														
6:58	1,008.8	10.6	78	n.	5.4	141	1,008.8	10.6		78	9.97	n.	5.4	Few A.Cu., sw.; few A.St., on n. horizon.
						250	996.0	11.1		72	9.51	n.	7.1	
						500	967.0	12.1		58	8.19	n.	11.1	
7:10	1,009.0	10.8	80	n.	4.9	520	964.3	12.2	−0.42	57	8.10	n.	11.4	
						750	938.9	10.8		85	7.12	n.	9.8	
						1,000	910.8	9.2		82	6.05	nnw.	8.1	
						1,250	884.2	7.7		49	5.15	nnw.	6.4	
7:39	1,009.6	11.9	76	n.	4.9	1,266	882.5	7.6	0.62	49	5.12	nnw.	6.3	
						1,500	857.9	6.1		54	5.09	nnw.	7.7	
						1,750	832.0	4.6		59	5.00	nnw.	9.2	
						2,000	807.3	3.0		65	4.93	nw.	10.8	
						2,250	783.0	1.4		70	4.73	nw.	12.3	Few A.St., n.
8:07	1,010.2	12.9	70	n.	4.0	2,302	777.7	1.1	0.63	71	4.70	nw.	12.6	
						2,500	759.3	0.1		69	4.24	nw.	13.8	
						2,750	736.3	− 1.1		66	3.68	nw.	15.2	
						3,000	714.0	− 2.4		63	3.15	nw.	16.7	
						3,250	691.9	− 3.6		61	2.76	nw.	18.1	
						3,500	670.4	− 4.9		58	2.35	nw.	19.6	
						3,750	649.3	− 6.1		55	2.01	nw.	21.0	
9:00	1,010.8	15.0	58	n.	4.0	3,762	648.2	− 6.2	0.62	55	1.99	nw.	21.1	
						3,750	649.3	− 6.1		55	2.01	nw.	21.0	
						3,500	670.4	− 4.2		53	2.28	nw.	19.9	
						3,250	691.9	− 2.4		52	2.60	nw.	18.8	
						3,000	714.0	− 0.5		51	2.99	nw.	17.6	
P. M.														
1:15	1,009.6	19.7	32	n.	6.3	2,910	721.8	0.2	0.65	50	3.10	nw.	17.2	
						2,750	736.3	1.2		49	3.26	nw.	16.3	
						2,500	759.3	2.9		46	3.46	nw.	14.9	
						2,250	783.0	4.5		44	3.70	nw.	13.6	
1:45	1,009.3	19.8	32	n.	5.8	2,131	794.5	5.3	−0.50	43	3.83	nw.	12.9	
						2,000	807.3	4.6		49	4.16	nw.	12.5	
1:55	1,009.2	19.9	30	n.	6.3	1,790	828.4	3.6	0.88	59	4.67	nnw.	11.9	
						1,750	832.5	4.0		58	4.72	nnw.	11.7	
						1,500	858.9	6.2		54	5.12	nnw.	10.8	
						1,250	885.0	8.4		49	5.40	n.	9.8	
						1,000	911.2	10.6		45	5.75	n.	8.8	
2:25	1,009.0	19.8	30	n.	6.3	839	929.2	12.0	0.83	42	5.89	n.	8.2	
						750	938.9	12.7		41	6.02	n.	7.8	
						500	967.0	14.8		39	6.56	nnw.	6.6	
2:36	1,008.9	19.8	31	nnw.	4.9	428	975.5	15.4	1.53	38	6.65	nnw.	6.3	
						250	996.0	18.1		34	7.06	nnw.	6.0	
2:40	1,008.9	19.8	31	nnw.	5.8	141	1,008.9	19.8		31	7.16	nnw.	5.8	Cloudless.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918.*

November 1, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δ t / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	m.	*mb.*	°C.		%	*mb.*		*m. p. s.*	
7:58	1,009.5	8.2	64	ese.	3.6	141	1,009.5	8.2	.....	64	6.96	ese.	3.6	Cloudless.
						250	996.8	9.2	.....	54	6.29	ese.	4.9	
8:05	1,009.5	8.4	64	ese.	3.1	369	982.1	10.2	−0.88	41	5.10	ese.	6.3	
						500	967.1	10.7	.....	28	3.60	ese.	4.7	
9:26	1,009.7	12.2	48	ese.	5.8	633	952.1	11.3	0.56	15	2.01	se.	3.1	
10:15	1,009.3	15.0	37	ese.	4.0	581	957.7	12.1	−0.99	15	2.12	.....	3.5	
						500	966.9	11.3	.....	17	2.28	.....	3.5	
10:17	1,009.3	15.0	37	ese.	4.5	450	972.6	10.8	1.68	19	2.46	.....	3.5	
						250	996.0	14.2	.....	31	5.02	.....	3.6	
10:10	1,008.6	16.0	37	ese.	3.6	141	1,008.6	16.0	.....	37	6.73	ese.	3.6	Cloudless.

November 2, 1918.

A. M.														
7:28	1,004.9	8.8	81	e.	2.2	141	1,004.9	8.8	.....	81	9.18	e.	2.2	Few A.Cu., wnw.
						250	992.0	10.6	.....	68	8.69	ese.	7.5	
7:35	1,004.9	9.0	81	e.	2.2	372	977.5	12.7	−1.69	53	7.79	sse.	13.4	
						500	962.9	13.1	.....	48	7.24	sse.	11.5	
7:44	1,005.0	9.2	81	se.	2.2	584	953.2	13.3	−0.28	44	6.72	sse.	10.2	
						750	935.0	12.6	.....	47	6.86	sse.	9.5	
						1,000	907.9	11.4	.....	52	7.01	s.	8.5	
						1,250	881.0	10.3	.....	56	7.02	s.	7.5	
						1,500	855.0	9.2	.....	61	7.10	ssw.	6.5	
8:21	1,005.3	11.2	76	se.	2.7	1,657	838.7	8.5	0.45	64	7.10	ssw.	5.9	
8:26	1,005.4	11.9	74	se.	2.7	1,725	831.8	11.3	−4.12	37	4.95	ssw.	5.7	
						1,750	829.5	11.2	.....	37	4.92	ssw.	5.7	
						2,000	804.6	10.0	.....	33	4.05	ssw.	6.1	
						2,250	781.0	8.8	.....	30	3.40	ssw.	6.4	
						2,500	758.0	7.6	.....	27	2.82	sw.	6.7	
						2,750	735.7	6.4	.....	24	2.31	sw.	7.1	
						3,000	713.6	5.2	.....	21	1.86	sw.	7.4	
9:42	1,006.0	15.9	52	sse.	4.9	3,206	695.6	4.2	0.47	18	1.48	sw.	7.7	
						3,000	713.6	5.2	.....	18	1.59	sw.	7.6	
						2,750	735.8	6.3	.....	18	1.72	sw.	7.6	
						2,500	758.7	7.5	.....	18	1.87	sw.	7.5	
						2,250	782.0	8.6	.....	18	2.01	sw.	7.4	
10:17	1,006.0	17.0	47	sse.	5.8	2,151	791.0	9.1	0.65	18	2.08	sw.	7.4	
						2,000	805.6	10.1	.....	18	2.22	sw.	7.4	
10:27	1,005.9	17.2	47	sse.	6.7	1,783	826.6	11.5	−1.56	18	2.44	ssw.	7.4	
						1,750	830.3	11.0	.....	20	2.63	ssw.	7.2	
10:30	1,005.9	17.2	47	sse.	6.7	1,597	845.6	8.6	0.57	29	3.24	ssw.	6.5	Few A.Cu., wnw.
						1,500	855.3	9.2	.....	33	3.84	ssw.	6.4	
						1,250	881.0	10.6	.....	43	5.50	ssw.	6.2	
						1,000	907.9	12.0	.....	53	7.44	s.	6.0	
10:57	1,005.7	18.6	48	sse.	5.8	843	925.6	12.9	−0.55	59	8.78	s.	5.9	
						750	936.0	12.4	.....	59	8.50	s.	5.2	
10:59	1,005.7	18.7	48	sse.	5.4	661	945.8	11.9	0.88	59	8.22	s.	4.6	
						500	964.4	13.3	.....	62	9.47	s.	4.7	
11:04	1,005.7	18.9	47	sse.	6.3	433	971.8	13.9	1.75	63	10.00	s.	4.7	
						250	993.0	17.1	.....	52	10.14	sse.	4.3	
11:09	1,005.6	19.0	46	sse.	4.0	141	1,005.6	19.0	.....	46	10.11	sse.	4.0	

November 3, 1918.

A. M.														
7:17	1,005.4	12.3	89	se.	2.7	141	1,005.4	12.3	.....	89	12.74	se.	2.7	4/10 A.Cu., ssw.
						250	992.6	13.5	.....	86	13.30	sse.	4.5	
7:22	1,005.5	12.3	89	se.	2.7	499	963.8	16.2	−1.09	80	14.74	s.	8.7	
						750	935.6	14.2	.....	84	13.60	s.	8.4	
						1,000	908.4	12.2	.....	88	12.50	ssw.	8.2	
7:49	1,005.9	12.7	86	se.	2.2	1,152	892.5	11.0	0.80	91	11.95	ssw.	8.0	2/10 A.Cu., sw.
						1,250	882.5	12.8	.....	49	7.24	ssw.	6.3	
7:57	1,006.0	13.0	84	sse.	3.1	1,270	880.1	13.2	−1.86	40	6.07	ssw.	5.9	
8:20	1,006.2	14.0	83	sse.	3.6	1,387	867.7	12.6	0.80	40	5.84	ssw.	5.3	1/10 Cl.Cu., sw.
10:19	1,006.3	19.9	69	sse.	4.5	1,277	880.1	13.8	−2.22	50	7.89	ssw.	4.6	
						1,250	882.5	13.2	.....	59	8.95	ssw.	5.2	
10:33	1,006.2	20.7	70	sse.	5.4	1,160	892.5	11.2	0.82	90	11.97	ssw.	7.1	
						1,000	909.5	12.5	.....	88	12.75	ssw.	6.5	
						750	937.0	14.6	.....	85	14.13	s.	5.7	
						500	965.0	16.6	.....	83	15.68	sse.	4.8	
10:48	1,006.2	20.8	69	sse.	5.4	445	971.2	17.1	1.28	82	15.99	sse.	4.6	
						250	993.7	19.6	.....	74	16.88	sse.	5.1	
10:54	1,006.1	21.0	70	sse.	5.4	141	1,006.1	21.0	.....	70	17.41	sse.	5.4	1/10 Cu., sw.

November 4, 1918.

A. M.														
7:04	1,004.0	15.0	92	e.	2.2	141	1,004.0	15.0	.....	92	15.69	e.	2.2	10/10 St.Cu., ssw.
						250	991.5	16.4	.....	79	14.73	ese.	7.2	
7:06	1,004.1	15.0	92	e.	2.2	284	987.4	16.8	−1.26	75	14.35	ese.	8.7	
						500	963.0	15.4	.....	79	13.82	se.	7.5	
						750	935.0	13.9	.....	84	13.34	se.	6.2	
7:50	1,004.6	15.4	92	e.	2.2	934	915.0	12.7	0.63	88	12.93	sse.	5.2	
						1,000	907.9	12.3	.....	88	12.59	sse.	5.1	
						1,250	881.5	10.7	.....	90	11.58	sse.	4.9	
8:31	1,004.9	16.3	89	e.	2.2	1,494	856.2	9.2	0.61	92	10.71	sse.	4.7	9/10 St.Cu., ssw.
						1,250	881.5	10.6	.....	93	11.89	sse.	4.7	

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 4, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
8:49	1,005.0	16.8	87	e.	3.1	1,054	902.4	11.8	0.89	93	12.87	sse.	4.7	
						1,000	907.9	12.3		91	13.02	sse.	4.9	
						750	935.4	14.5		82	13.54	sse.	5.9	
9:17	1,005.2	18.0	82	e.	4.9	525	961.1	16.5	0.44	74	13.89	sse.	6.7	
						500	964.0	16.6		74	13.98	sse.	6.6	
						250	992.9	17.7		78	15.80	ese.	5.1	
9:22	1,005.2	18.2	80	e.	4.5	141	1,005.2	18.2		80	16.72	e.	4.5	

November 5, 1918.

A. M.														
8:20	1,001.1	17.7	95	ese.	2.7	141	1,001.1	17.7		95	19.24	ese.	2.7	Light fog becoming dense at about 100 m. above ground.
						250	988.7	17.4		96	19.08	se.	6.0	
						500	960.2	16.8		99	18.94	s.	13.6	
8:30	1,001.2	17.9	94	ese.	2.7	550	954.6	16.7	0.24	100	19.01	s.	15.1	Altitude of St. base about 250 m.
						750	932.2	15.5		100	17.61	s.	13.9	
8:43	1,001.2	18.3	92	ese.	4.0	972	908.5	14.1	0.62	100	16.09	s.	12.6	
						1,000	905.3	14.0		99	15.82	s.	12.5	
						1,250	878.8	13.2		88	13.35	s.	11.8	
						1,500	853.0	12.4		77	11.09	s.	11.0	
						1,750	828.7	11.6		66	9.02	s.	10.3	Altitude of St. base about 300 m.
						2,000	804.5	10.8		55	7.12	s.	9.5	
9:17	1,001.4	19.4	90	ese.	5.4	2,011	803.1	10.8	0.32	55	7.12	s.	9.5	
9:22	1,001.4	19.6	89	ese.	5.4	2,064	798.1	12.5	−3.21	28	4.06	s.	9.0	Altitude of St. base about 350 m.
						2,250	780.9	11.6		29	3.96	s.	8.2	
						2,500	758.0	10.4		30	3.78	s.	7.1	
						2,750	735.9	9.2		32	3.72	s.	6.0	
10:35	1,001.7	20.7	86	sse.	6.3	2,948	718.3	8.3	0.54	33	3.61	s.	5.2	
						2,750	735.9	9.5		31	3.68	s.	7.0	
						2,500	758.0	11.0		29	3.81	ssw.	9.3	4/10 St.Cu., s.; 4/10 St., s.
						2,250	780.9	12.5		26	3.77	ssw.	11.6	
11:08	1,001.6	21.5	82	se.	6.3	2,228	782.9	12.6	−0.62	26	3.79	ssw.	11.8	Altitude of St. base about 650 m.; few Ci.sw 7/10 St.Cu., s.
						2,000	804.5	11.2		49	6.52	ssw.	13.4	
11:15	1,001.6	22.0	80	se.	6.3	1,908	813.4	10.6	0.71	58	7.41	ssw.	14.1	
						1,750	828.7	11.7		63	8.66	ssw.	14.0	
						1,500	853.9	13.5		71	10.98	s.	13.8	
						1,250	879.8	15.3		79	13.73	s.	13.6	
11:30	1,001.5	22.9	74	se.	6.7	1,148	890.5	16.0	−1.09	82	14.91	s.	13.5	
11:33	1,001.5	22.9	74	se.	5.8	1,010	904.9	14.5	0.72	95	15.68	s.	16.3	
						1,000	906.0	14.6		95	15.79	s.	16.1	
						750	933.0	16.4		95	17.72	s.	11.9	
						500	960.2	18.2		95	19.86	ssw.	7.7	
11:43	1,001.4	23.2	73	se.	8.5	472	963.9	18.4	1.45	95	20.10	ssw.	7.2	
						250	988.7	21.6		78	20.12	s.	6.6	
11:57	1,001.3	23.2	70	sse.	6.3	141	1,001.3	23.2		70	19.91	sse.	6.3	

November 6, 1918.

A. M.														
7:14	1,000.2	21.3	88	se.	5.4	141	1,000.2	21.3		88	22.29	se.	5.4	9/10 St.Cu., sw.; few St., se.; altitude of St. base about 500 m.
						250	983.2	20.5		89	21.47	se.	7.1	
						500	960.2	18.5		92	19.00	sse.	11.1	
						750	932.4	16.6		94	17.76	s.	15.0	
7:30	1,000.4	21.5	88	sse.	5.8	907	915.0	15.4	0.77	96	16.80	s.	17.5	
7:35	1,000.4	21.5	88	sse.	5.4	924	913.2	17.2	−10.59	75	14.72	s.	17.4	
						1,000	905.4	16.8		76	14.54	s.	17.8	
						1,250	879.3	15.3		78	13.56	sse.	19.2	
7:52	1,000.6	21.5	88	sse.	6.7	1,426	861.3	14.3	0.58	79	12.88	sse.	20.2	
7:55	1,000.6	21.6	88	sse.	6.7	1,480	856.0	15.0	− 1.30	88	15.00	s.	16.1	
						1,500	853.9	14.9		88	14.91	s.	16.0	
						1,750	829.0	13.5		88	13.61	s.	14.2	
						2,000	805.0	12.1		87	12.28	ssw.	12.4	
8:20	1,000.8	21.8	87	se.	7.6	2,133	792.3	11.3	0.57	87	11.65	ssw.	11.4	
						2,250	781.8	10.7		84	10.81	ssw.	11.1	
						2,500	758.8	9.5		77	9.14	ssw.	10.4	Altitude of St.Cu. base about 2,750 m.
						2,750	736.5	8.2		70	7.61	sw.	9.8	Few A.Cu., sw.; 7/10 St.Cu., se.; 1/10 St., s.
						3,000	714.3	6.9		63	6.27	sw.	9.1	
9:28	1,001.0	23.2	79	sse.	11.2	3,166	699.8	6.1	0.62	58	5.46	sw.	8.7	
						3,000	714.3	7.3		70	7.16	sw.	10.0	
9:51	1,001.0	23.3	80	sse.	9.8	2,923	721.0	7.9		75	7.99	sw.	10.6	10/10 St.Cu., se.; altitude of St.Cu. base about 700 m.
9:55	1,001.0	23.2	80	sse.	8.0	2,943	719.3	6.4	0.58	96	9.23	sw.	12.3	
						2,750	736.9	7.5		96	9.96	sw.	12.1	
						2,500	759.2	9.0		96	11.02	ssw.	11.8	
						2,250	782.2	10.4		96	12.11	s.	11.5	
10:30	1,001.0	24.2	74	se.	8.9	2,121	794.0	11.2	0.52	96	12.77	s.	11.3	
						2,000	805.7	11.8		96	13.29	s.	12.4	
						1,750	829.8	13.1		95	14.33	s.	14.6	
						1,500	854.7	14.5		94	15.52	s.	16.8	
11:01	1,001.0	24.8	70	se.	11.6	1,263	879.0	15.7	0.58	93	16.59	s.	18.9	
						1,250	880.6	15.8		93	16.69	s.	18.8	
						1,000	906.6	17.2		92	18.05	s.	17.8	
						750	933.5	18.7		91	19.63	sse.	16.7	
11:22	1,000.6	25.3	69	sse.	11.2	544	955.6	19.9	1.44	90	20.92	sse.	15.8	3/10 Ci.St., sw.; 5/10 St.Cu.,
						500	960.4	20.5		87	20.98	sse.	15.3	
						250	988.2	24.1		72	21.61	se.	12.4	
11:34	1,000.4	25.7	66	se.	11.2	141	1,000.4	25.7		66	21.80	se.	11.2	

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 7, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
7:08	998.0	22.2	89	sse.	8.9	141	998.0	22.2	.....	89	23.83	sse.	8.9	10/10 St., se.
						250	985.6	21.4	.....	92	23.45	sse.	10.1	
						500	957.5	19.4	.....	99	22.30	s.	12.9	
7:13	998.1	22.2	89	se.	9.8	517	955.7	19.3	0.77	99	22.17	s.	13.1	Altitude of St. base about 500 m.
						750	929.9	17.8	.....	95	19.36	s.	14.7	
						1,000	903.3	16.2	.....	91	16.76	s.	16.4	
						1,250	878.0	14.7	.....	87	14.56	s.	18.1	
7:39	998.6	22.3	88	s.	8.9	1,290	873.7	14.4	0.63	86	14.10	s.	18.4	
						1,500	852.9	13.9	.....	80	12.70	s.	19.1	Weather is threatening.
						1,750	826.0	13.4	.....	72	11.07	s.	19.9	
						2,000	801.0	12.9	.....	65	9.67	s.	20.6	
8:04	999.0	22.7	86	sse.	8.0	2,173	787.3	12.5	0.24	60	8.09	s.	21.2	
						2,000	804.0	12.9	.....	66	9.82	s.	21.1	
						1,750	828.0	13.6	.....	76	11.84	s.	21.0	
						1,500	852.9	14.2	.....	85	13.76	s.	21.0	
						1,250	878.0	14.9	.....	94	15.92	s.	20.9	
8:43	999.0	22.9	85	sse.	10.3	1,085	895.2	15.3	0.08	100	17.38	s.	20.8	
						1,000	904.2	15.9	.....	100	18.07	s.	19.7	
						750	931.3	17.6	.....	100	20.13	s.	16.5	
9:12	999.0	23.2	84	ssw.	10.7	543	953.9	19.0	1.00	100	21.97	s.	13.8	Altitude of St. base about 700 m.
						500	958.6	19.4	.....	98	22.08	s.	13.2	
						250	986.4	21.9	.....	88	23.13	ssw.	9.6	
9:18	999.0	23.0	84	ssw.	8.0	141	999.0	23.0	.....	84	23.60	ssw.	8.0	10/10 St., s.

November 9, 1918.

A. M.														
7:24	1,007.4	13.0	82	nne.	5.4	141	1,007.4	13.0	.....	82	12.28	nne.	5.4	2/10 A.Cu., sw.; 5/10 A.St., sw.
						250	994.7	12.9	.....	67	9.97	nne.	7.7	
7:30	1,007.5	13.0	82	nne.	5.4	504	964.8	12.8	0.05	31	4.58	nne.	13.2	
						750	936.8	11.7	.....	29	3.99	nne.	13.4	
						1,000	909.2	10.5	.....	26	3.30	ne.	13.5	
7:50	1,007.7	13.2	79	nne.	5.4	1,160	882.3	9.8	0.43	*25	3.03	ne.	13.6	
						1,250	882.7	9.6	.....	*25	2.99	ne.	12.8	
						1,500	856.6	8.9	.....	*25	2.82	nne.	10.5	
						1,750	831.5	8.2	.....	*25	2.72	n.	8.2	
8:19	1,008.2	13.6	80	n.	5.4	1,973	809.4	7.6	0.27	*25	2.61	nnw.	6.2	
						2,000	806.8	7.5	.....	*25	2.59	nnw.	6.3	
						2,250	783.0	6.5	.....	*25	2.42	nnw.	6.8	1/10 A.Cu., wsw.; 7/10 A.St., wsw.
						2,500	759.4	5.5	.....	*25	2.26	nw.	7.4	
						2,750	736.7	4.5	.....	*25	2.10	nw.	8.0	
9:43	1,009.1	13.7	73	nne.	5.8	2,861	726.7	4.1	0.38	*25	2.05	nw.	8.2	3/10 A.Cu., wsw.; 2/10 A.St., wsw.
						2,750	736.7	4.5	.....	*25	2.10	nw.	7.8	
						2,500	759.4	5.4	.....	*25	2.24	nw.	6.9	
						2,250	783.0	6.3	.....	*25	2.39	nnw.	6.0	
10:10	1,009.1	14.4	68	nne.	7.2	2,133	794.2	6.7	0.25	*25	2.45	nnw.	5.6	2/10 A.Cu., wsw.; 4/10 A.St., sw.
						2,000	807.2	7.0	.....	*25	2.50	nnw.	6.5	
						1,750	832.1	7.6	.....	*25	2.61	n.	8.1	
						1,500	857.8	8.3	.....	*25	2.74	n.	9.8	
						1,250	884.0	8.9	.....	*25	2.85	nne.	11.4	
10:48	1,009.1	15.0	61	nne.	7.2	1,205	888.7	9.0	0.47	*25	2.87	nne.	11.7	
						1,000	910.8	10.0	.....	28	3.07	nne.	11.3	1/10 A.Cu., sw.; 2/10 A.St., sw.
						750	938.4	11.1	.....	32	3.59	ne.	10.8	
11:15	1,009.0	16.0	58	nne.	7.2	519	964.8	12.2	1.11	36	5.12	ne.	10.3	
						500	967.0	12.4	.....	37	5.33	ne.	10.1	
						250	996.3	15.2	.....	51	8.81	ne.	6.8	
11:21	1,009.0	16.4	57	ne.	5.4	141	1,009.0	16.4	.....	57	10.63	ne.	5.4	

November 10, 1918.

A. M.														
7:05	1,011.6	8.0	86	n.	4.0	141	1,011.6	8.0	.....	86	9.23	n.	4.0	Few A.St., on s. horizon.
						250	999.0	8.5	.....	76	8.44	nne.	7.0	
7:07	1,011.6	8.0	86	n.	3.6	456	973.9	9.5	−0.48	57	6.77	nne.	12.7	
						500	968.0	9.5	.....	55	6.53	nne.	12.4	
						750	939.0	9.5	.....	45	5.34	nne.	10.4	
						1,000	911.7	9.4	.....	35	4.13	nne.	8.4	
						1,250	885.8	9.4	.....	25	2.95	nne.	6.4	
8:07	1,012.3	9.8	77	nne.	3.6	1,328	877.5	9.4	0.01	†22	2.59	nne.	5.8	
						1,500	860.0	8.7	.....	†22	2.48	nne.	5.3	
						1,750	834.9	7.6	.....	†22	2.30	ne.	4.7	
9:40	1,013.2	12.8	62	ne.	3.6	1,966	813.3	6.7	0.45	†22	2.16	ne.	4.1	
						1,750	834.9	7.7	.....	†22	2.31	ne.	4.2	
						1,500	860.6	8.9	.....	†22	2.51	ne.	4.3	
						1,250	887.0	10.1	.....	†22	2.72	ne.	4.4	
10:10	1,013.0	13.6	62	ene.	2.7	1,136	898.8	10.7	−0.61	†22	2.83	ne.	4.5	
						1,000	913.8	9.9	.....	†22	2.68	ne.	4.5	
						750	941.7	8.3	.....	†22	2.41	ne.	4.4	
10:20	1,013.0	13.7	63	ene.	2.7	728	944.2	8.2	0.99	†22	2.39	ne.	4.4	
						500	970.7	10.4	.....	38	4.79	ne.	3.7	
						250	1,000.7	12.9	.....	55	8.18	ene.	3.0	
10:36	1,012.8	14.0	63	ene.	2.7	141	1,012.8	14.0	.....	63	10.07	ene.	2.7	Few A.St.

* Relative humidity below 25 per cent.

† Relative humidity below 22 per cent.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 11, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:05	1,000.9	7.0	87	e.	1.8	141	1,000.9	7.0	.....	87	8.72	e.	1.8	Cloudless.
						250	997.3	8.9	.....	78	8.89	e.	5.0	
7:07	1,000.9	7.0	88	e.	1.8	310	989.5	9.9	−1.72	73	8.91	e.	6.7	
						500	968.9	9.6	.....	69	8.25	ese.	3.5	
8:37	1,010.9	10.1	77	ese.	1.8	537	957.6	9.4	0.18	67	7.90	ese.	1.8	
						500	968.9	9.6	.....	67	8.01	ese.	1.8	
9:08	1,011.2	11.2	74	ese.	2.7	387	981.9	9.8	0.57	66	8.00	ese.	1.9	
						250	998.0	10.6	.....	70	8.95	ese.	2.3	
9:10	1,011.2	11.2	74	ese.	2.7	141	1,011.2	11.2	.....	74	9.84	ese.	2.7	

November 12, 1918.

A. M.														
7:16	1,000.7	4.8	79	s.	2.7	141	1,000.7	4.8	.....	79	6.79	s.	2.7	Few Cl.St., w.
						250	987.8	12.4	.....	54	7.78	s.	9.0	
7:18	1,000.7	4.9	79	s.	2.7	261	986.2	13.2	−7.00	51	7.74	s.	9.6	
						500	9 8.0	12.5	.....	47	6.81	ssw.	10.2	
						750	929.9	11.9	.....	43	5.99	ssw.	10.7	
						1,000	902.4	11.2	.....	40	5.32	sw.	11.3	
						1,250	876.0	10.5	.....	36	4.57	wsw.	11.9	
7:55	1,000.7	6.1	81	s.	1.3	1,424	858.4	10.0	0.28	33	4.05	wsw.	12.3	
						1,500	850.5	9.4	.....	33	3.89	wsw.	12.1	
						1,750	825.7	7.5	.....	34	3.53	wsw.	11.3	
						2,000	801.0	6.6	.....	35	3.18	wsw.	10.5	
8:18	1,000.6	7.5	77	s.	1.3	2,134	788.0	4.6	0.76	36	3.05	wsw.	10.1	
						2,250	777.0	5.9	.....	32	2.97	wsw.	9.5	
8:22	1,000.6	7.9	75	s.	1.3	2,308	771.2	6.6	−1.15	30	2.92	wsw.	9.2	
						2,500	753.0	5.4	.....	28	2.51	wsw.	9.9	
						2,750	730.8	3.9	.....	25	2.02	w.	10.8	
						3,000	708.9	2.4	.....	22	1.60	w.	11.7	
8:47	1,000.4	9.6	73	s.	1.3	3,150	695.7	1.5	0.61	20	1.36	w.	12.2	
						3,250	687.3	1.0	.....	20	1.31	w.	12.3	
						3,500	666.4	−0.3	.....	19	1.13	w.	12.6	
						3,750	646.0	−1.6	.....	18	0.96	w.	12.9	
						4,000	626.4	−2.9	.....	17	0.82	w.	13.2	
						4,250	607.0	−4.2	.....	17	0.73	w.	13.5	
9:26	1,000.3	12.0	62	s.	2.7	4,484	588.9	−5.4	0.52	16	0.62	w.	13.8	
						4,500	588.0	−5.5	.....	16	0.61	w.	13.9	
						4,750	569.0	−7.3	.....	21	0.69	w.	15.6	
						5,000	551.6	−9.1	.....	25	0.70	w.	17.2	
9:48	1,000.3	14.0	52	s.	4.0	5,040	548.1	−9.4	0.68	26	0.71	w.	17.5	
						5,000	551.6	−9.1	.....	26	0.73	w.	17.4	
						4,750	569.0	−7.6	.....	25	0.80	w.	16.3	
						4,500	588.0	−6.0	.....	25	0.92	w.	15.3	
						4,250	607.0	−5.4	.....	24	0.93	wnw.	14.3	
						4,000	626.4	−2.8	.....	23	1.11	wnw.	13.3	
10:26	1,000.2	15.7	49	s.	5.4	3,934	630.6	−2.4	0.59	23	1.15	wnw.	13.0	
						3,750	646.0	−1.3	.....	24	1.32	wnw.	12.1	
						3,500	666.4	0.2	.....	25	1.55	wnw.	11.0	
						3,250	687.3	1.6	.....	26	1.78	w.	9.8	
						3,000	708.9	3.1	.....	27	2.06	w.	8.6	
10:54	1,000.0	17.0	52	s.	5.4	2,885	718.5	3.8	0.90	28	2.25	w.	8.1	
						2,750	730.8	5.1	.....	27	2.37	w.	7.2	
11:03	1,000.0	17.2	49	ssw.	5.4	2,574	746.3	6.8	−0.59	25	2.47	wsw.	6.1	
						2,500	753.0	6.4	.....	25	2.40	wsw.	6.1	
11:08	999.9	17.2	48	ssw.	5.4	2,285	772.9	5.1	0.58	26	2.29	wsw.	6.1	
						2,250	777.0	5.3	.....	26	2.32	wsw.	5.4	
						2,000	801.0	6.7	.....	28	2.75	wsw.	8.9	
						1,750	825.7	8.2	.....	30	3.26	wsw.	11.3	
						1,500	850.5	9.6	.....	32	3.82	wsw.	13.7	
11:28	999.5	18.0	42	ssw.	6.3	1,438	856.6	10.0	0.43	33	4.05	wsw.	14.3	
						1,250	876.0	10.8	.....	35	4.53	wsw.	12.9	
						1,000	902.4	11.9	.....	38	5.29	sw.	11.0	
						750	929.9	13.0	.....	41	6.14	sw.	9.1	
						500	957.8	14.1	.....	43	6.92	ssw.	7.2	
11:52	999.1	18.7	38	ssw.	5.8	448	963.6	14.3	1.53	44	7.17	ssw.	6.8	
						250	986.7	17.3	.....	39	7.70	ssw.	5.9	
P. M.														
12:02	999.0	19.0	36	ssw.	5.4	141	999.0	19.0	.....	36	7.91	ssw.	5.4	1/10 Cl.St.

November 14, 1918.

A. M.														
7:14	1,001.0	8.5	92	ese.	2.7	141	1,001.0	8.5	.....	92	9.10	ese.	2.7	8/10 A.St., sw.; 1/10 A.Cu., sw.
						250	988.0	12.5	.....	89	12.90	ese.	10.9	
7:15	1,001.0	8.5	92	ese.	2.7	268	985.7	13.2	−3.70	89	13.50	ese.	12.3	
						500	957.7	12.7	.....	75	11.02	se.	11.5	
						750	929.3	12.2	.....	60	8.53	se.	10.7	
						1,000	902.2	11.7	.....	46	6.32	sse.	9.9	
						1,250	876.4	11.2	.....	31	4.12	s.	9.1	
7:50	1,001.0	9.3	88	ese.	1.8	1,346	867.0	11.0	0.21	*25	3.28	s.	8.8	
						1,500	851.0	9.8	.....	31	3.76	s.	9.1	
						1,750	827.0	7.8	.....	40	4.23	s.	9.5	
						2,000	801.0	5.9	.....	49	4.55	sse.	9.9	
						2,250	776.6	3.9	.....	58	4.69	sse.	10.3	
8:23	1,000.9	10.1	87	ese.	1.8	2,453	758.0	2.3	0.79	66	4.76	sse.	10.6	6/10 A.St., sw.; 1/10 A.Cu., sw.; 3/10 St.Cu., s
						2,500	753.0	2.9	.....	60	4.52	sse.	10.3	
						2,750	730.5	6.2	.....	28	2.65	sse.	8.7	

*Relative humidity below 25 per cent.

TABLE 16.—*Free-air data from kite flights in Groesbeck Aerological Station, November, 1918*—Continued.

November 14; 1918—Continued.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{10m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:42	1,000.8	11.2	83	ese.	2.7	2,773	728.5	6.5	−1.31	*25	2.42	sse.	8.5	
						3,000	708.4	5.0		*25	2.18	sse.	9.1	
						3,250	688.9	3.3		*25	1.94	s.	9.8	
						3,500	669.3	1.7		*25	1.73	s.	10.5	
						3,750	649.3	0.0		*25	1.55	ssw.	11.2	
9:46	1,000.2	14.7	76	ese.	5.8	3,904	629.4	− 1.4	0.72	*25	1.36	ssw.	11.8	
						3,750	649.3	0.3		25	1.56	sw.	11.5	
						3,500	669.3	2.2		25	1.86	sw.	11.2	
						3,250	689.9	4.2		26	2.14	wsw.	11.0	1/10 A.Cu., sw.; 7/10 A.St., sw.; 2/10 St.Cu., s
10:22	999.9	15.7	76	ese.	4.5	3,208	691.1	4.5	0.61	26	2.19	wsw.	10.9	
						3,000	708.4	5.8		26	2.40	wsw.	10.2	
						2,750	730.5	7.3		25	2.56	wsw.	9.2	
10:50	999.7	16.2	72	ese.	4.5	2,518	751.4	8.7	−7.04	*25	2.81	wsw.	8.4	Altitude of St.Cu. base about 240 m.
						2,500	753.0	7.4		29	2.99	wsw.	8.2	
10:53	999.6	16.2	72	ese.	4.9	2,147	738.0	3.7	0.71	40	3.18	sw.	7.5	
						2,250	776.6	5.1		38	3.34	sw.	8.3	
						2,000	800.5	6.9		35	3.48	ssw.	9.3	
						1,750	825.0	8.7		32	3.60	ssw.	10.3	
11:20	999.4	16.5	74	ese.	5.4	1,575	842.5	9.9	0.23	30	3.66	ssw.	11.0	
						1,500	850.0	10.1		38	4.70	ssw.	11.2	10/10 St.Cu., s.
						1,250	876.0	10.7		65	8.37	s.	11.7	
11:45	999.2	16.7	74	ese.	4.5	1,050	897.2	11.2	0.00	86	11.44	s.	12.1	
						1,000	902.2	11.5		86	11.67	s.	12.2	
						750	929.3	13.0		85	12.73	sse.	12.6	
11:52	999.1	16.8	74	se.	4.9	634	942.7	13.7	0.67	85	13.33	sse.	12.8	
						500	957.7	14.6		82	13.63	sse.	10.5	
						250	987.6	16.3		76	14.08	sse.	6.3	
P. M.														
12:01	999.0	17.0	73	sse.	4.5	141	999.0	17.0		73	14.15	sse.	4.5	

November 15, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{10m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:18	991.1	17.5	97	se.	8.0	141	991.1	17.5		97	19.40	se.	8.0	10/10 St.Cu., s.
						250	978.5	17.6		96	19.32	se.	9.6	Light rain from 7:02 to 8:45 a. m.
						500	950.5	17.7		94	19.04	sse.	13.2	
7:31	991.0	17.8	95	se.	8.0	597	939.8	17.8	−0.07	93	18.95	s.	14.6	Altitude of St.Cu. base about 1,150 m.
						750	923.3	16.9		93	17.90	s.	14.7	
						1,000	896.8	15.6		93	16.48	s.	14.9	
7:47	990.9	17.7	90	sse.	6.3	†1,316	863.6	13.4	0.61	93	14.20	s.	15.2	Altitude of St.Cu. base about 850 m.

November 16, 1918, series (No. 1).

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{10m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:15	989.5	16.0	67	sw.	5.4	141	989.5	16.0		67	12.18	sw.	5.4	4/10 St.Cu., w.
7:17	989.5	15.9	67	sw.	5.4	250	977.0	16.4		57	10.63	sw.	11.6	
						386	961.5	17.0	−0.41	45	8.72	sw.	19.3	
						500	948.6	16.5		44	8.26	sw.	19.8	
						750	921.0	15.5		41	7.22	sw.	20.8	
						1,000	894.4	14.5		38	6.27	wsw.	21.8	6/10 St.Cu., w.
						1,250	868.5	13.5		35	5.41	wsw.	22.8	Altitude of St.Cu. base about 1,300 m.
7:47	989.5	16.5	57	wsw.	6.3	1,284	864.8	13.4	0.40	35	5.38	wsw.	22.9	
						1,500	842.8	11.6		44	6.01	wsw.	22.9	
						1,750	817.8	9.5		55	6.53	wsw.	22.9	
						2,000	793.8	7.3		66	6.75	wsw.	22.8	
						2,250	770.1	5.2		77	6.81	wsw.	22.8	10/10 St.Cu., w.
8:27	989.6	16.7	59	wsw.	5.8	2,335	761.8	4.5	0.88	81	6.82	wsw.	22.8	
						2,250	770.1	5.3		74	6.59	wsw.	22.7	
						2,000	793.8	7.5		53	5.50	w.	22.0	
						1,750	818.1	9.8		32	3.88	w.	21.4	7/10 St.Cu., w.
9:23	990.1	18.1	54	wsw.	6.7	1,735	819.4	9.9	0.44	31	3.78	w.	21.4	
						1,500	843.3	10.9		33	4.30	w.	20.7	4/10 St.Cu., w.
						1,250	869.2	12.0		34	4.77	w.	20.0	
						1,000	895.1	13.1		36	5.43	wsw.	19.3	
						750	922.0	14.2		38	6.11	wsw.	18.5	
10:04	990.5	19.3	49	wsw.	9.8	595	939.1	14.9	0.88	39	6.61	wsw.	18.1	
						500	949.8	15.7		42	7.49	wsw.	16.1	
						250	978.3	17.9		48	9.84	wsw.	10.8	
10:10	990.5	18.9	51	wsw.	8.5	141	990.5	18.9		51	11.14	wsw.	8.5	

November 16, 1918, series (No. 2).

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{10m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
10:39	989.8	20.0	52	wsw.	8.9	141	989.8	20.0		52	12.16	wsw.	8.9	1/10 St.Cu., w.
						250	977.6	19.0		50	10.98	wsw.	11.3	
						500	949.0	16.8		47	8.99	wsw.	16.9	
11:09	989.7	20.0	49	wsw.	8.5	547	914.0	16.4	0.89	46	8.58	wsw.	18.0	
						750	921.5	15.6		41	7.27	wsw.	18.1	
						1,000	894.7	14.7		34	5.69	wsw.	18.2	
11:27	989.5	20.5	52	wsw.	9.4	1,250	868.7	13.7		28	4.39	wsw.	18.3	
						1,275	866.0	13.6	0.33	27	4.21	wsw.	18.3	
						1,500	843.0	11.8		26	3.60	sw.	20.4	
						1,750	818.0	9.7		25	3.01	ssw.	22.7	
						2,000	793.6	7.7		24	2.52	s.	25.1	

* Relative humidity below 25 per cent.

† Kite broke away.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 16, 1918, series (No. 2)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	° *C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
12:09	989.1	21.5	47	WSW.	8.9	2,143	779.8	6.5	0.64	23	2.23	S.	23.4	Few St.Cu., w.
						2,000	793.6	7.2		25	2.54	S.	25.8	
1:00	988.8	22.5	41	WSW.	13.4	1,772	815.4	8.2	0.76	28	3.04	S.	24.8	
						1,750	818.0	8.4		28	3.09	S.	24.6	
						1,500	843.0	10.3		34	4.26	SSW.	22.2	
						1,250	868.7	12.2		40	5.68	SW.	19.9	
						1,000	894.7	14.1		45	7.24	WSW.	17.5	
1:30	988.8	23.1	46	WSW.	8.9	932	901.8	14.6	1.24	47	7.81	WSW.	16.9	
						750	921.5	16.9		41	7.89	WSW.	16.8	
1:41	988.8	23.3	36	WSW.	13.4	577	940.3	19.0	0.96	36	7.91	WSW.	16.8	
						500	949.0	19.7		36	8.26	WSW.	16.4	
						250	976.7	22.2		35	9.37	WSW.	14.9	
1:54	988.8	23.2	35	WSW.	14.3	141	988.8	23.2		35	9.95	WSW.	14.3	Few A.St., w.

November 16, 1918, series (No. 3).

P. M.														
2:29	988.8	23.3	36	WSW.	8.5	141	988.8	23.3		36	10.30	WSW.	8.5	Few A.St., w.
						250	976.9	21.9		34	8.94	WSW.	10.3	
2:38	988.8	23.4	35	WSW.	13.4	497	948.9	18.8	1.26	31	6.73	W.	14.3	
						750	921.1	16.5		35	6.57	W.	14.6	
						1,000	894.6	14.2		40	6.48	W.	14.8	
						1,250	868.5	11.9		44	6.13	W.	15.1	
						1,500	843.0	9.6		49	5.86	W.	15.3	
3:16	988.9	23.4	36	WSW.	9.8	1,572	835.6	9.0	0.91	50	5.74	W.	15.4	Dust clouds on horizon.
						1,750	817.8	7.8		44	4.66	W.	16.6	Few A.St., w.; 4/10 St., n.
						2,000	793.2	6.1		35	3.30	WNW.	18.3	
						2,250	769.7	4.5		26	2.19	WNW.	20.0	Kite obscured by dust.
4:02	989.1	22.3	36	WSW.	8.9	2,378	757.6	3.6	0.72	21	1.66	WNW.	20.9	
						2,250	769.7	4.6		23	1.95	WNW.	20.2	
						2,000	793.2	6.5		27	2.61	WNW.	19.0	
						1,750	817.8	8.5		31	3.44	WNW.	17.7	
						1,500	843.0	10.4		35	4.41	WNW.	16.4	
4:38	989.5	21.7	37	WSW.	8.9	1,422	851.3	11.0	0.92	36	4.73	WNW.	16.0	3/10 A.Cu., w.
						1,250	869.0	12.6		36	5.25	WNW.	16.1	
						1,000	895.5	14.9		35	5.93	W.	16.2	
						750	922.5	17.2		35	6.87	W.	16.3	
5:18	990.0	20.8	42	WSW.	8.0	641	934.1	18.2	0.46	35	7.32	W.	16.3	
						500	949.7	19.0		37	8.13	W.	14.0	
						250	976.9	20.0		41	9.59	WSW.	9.8	
5:38	990.1	20.5	43	WSW.	8.0	141	990.1	20.5		43	10.37	WSW.	8.0	Cloudless; thick dust on horizon.

November 16, 1918, series (No. 4).

P. M.														
6:24	990.8	20.0	45	WSW.	7.6	141	990.8	20.0		45	10.52	WSW.	7.6	Cloudless. Dust storm.
						250	978.7	19.8		42	9.70	WSW.	10.0	
						500	950.7	19.4		35	8.11	W.	15.4	
6:23	990.8	20.0	45	WSW.	7.6	562	943.5	19.3	0.17	35	7.84	W.	16.8	
						750	923.5	17.6		35	7.05	W.	17.0	
						1,000	895.7	15.2		35	6.04	W.	17.2	
						1,250	870.8	12.9		35	5.21	W.	17.5	
6:52	991.1	20.0	45	WSW.	8.5	1,261	869.2	12.8	0.93	35	5.17	W.	17.5	
						1,500	845.2	10.3		40	5.01	W.	18.5	
7:19	991.5	19.3	45	WSW.	7.2	1,693	825.5	8.3	1.04	44	4.82	W.	19.3	
						1,750	820.5	7.8		46	4.87	W.	19.5	
						2,000	796.0	5.4		52	4.66	W.	20.2	
						2,250	772.0	3.0		59	4.47	W.	20.9	
						2,500	748.6	0.6		66	4.21	W.	21.5	
7:58	992.2	18.9	46	WSW.	7.2	2,663	733.1	−1.0	0.96	70	3.93	W.	22.0	
						2,500	748.6	0.6		68	4.34	W.	21.6	
						2,250	772.0	2.9		64	4.82	W.	21.0	
						2,000	796.0	5.3		61	5.44	WNW.	20.3	
						1,750	820.5	7.7		58	6.10	WNW.	19.7	
8:40	992.9	19.2	42	W.	8.9	1,699	825.5	8.2	0.75	57	6.20	WNW.	19.6	
						1,500	845.9	9.7		45	5.41	WNW.	18.8	
9:04	993.3	18.8	46	WNW.	8.5	1,274	869.2	11.4	0.86	31	4.18	WNW.	17.8	
						1,250	871.9	11.6		31	4.23	WNW.	17.8	
						1,000	898.0	13.8		31	4.89	WNW.	17.5	
						750	925.0	15.9		32	5.78	W.	17.2	
9:28	993.9	18.2	48	W.	8.5	586	943.5	17.3	0.22	32	6.32	W.	17.0	
						500	953.0	17.5		35	7.00	W.	15.4	
						250	981.7	18.1		43	8.93	W.	10.9	
9:35	994.0	18.3	47	W.	8.9	141	994.0	18.3		47	9.88	W.	8.9	Cloudless.

November 16 and 17, 1918, series (No. 5).

P. M.														
10:23	995.0	16.8	51	W.	7.6	141	995.0	16.8		51	9.76	W.	7.6	2/10 A.Cu., w.
						250	983.0	16.1		50	9.15	W.	9.2	Faint lunar halo, 22° radius, at 10:29 p. m.
						500	954.2	14.5		49	8.09	W.	12.9	
						750	926.2	12.9		48	7.14	WNW.	16.6	4/10 Ci.St., w.
10:46	995.4	15.8	56	W.	9.8	933	906.0	11.7	0.64	47	6.46	WNW.	19.3	
						1,000	899.0	11.3		46	6.16	WNW.	19.3	
						1,250	872.5	10.5		42	5.33	WNW.	19.3	
						1,500	846.5	8.2		38	4.13	WNW.	19.4	

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 16 and 17, 1918, series (No. 5)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:12	995.9	15.0	55	wnw.	10.3	1,734	822.9	6.7	0.62	34	3.34	wnw.	19.4	
						1,750	821.4	6.6	.....	34	3.32	wnw.	19.4	
						2,000	796.5	4.5	.....	33	2.78	wnw.	19.1	5/10 Ci.St., w.
						2,250	772.8	2.4	.....	32	2.32	wnw.	18.9	
						2,500	749.4	0.3	.....	31	1.93	wnw.	18.5	
						2,750	726.3	− 1.8	.....	30	1.58	wnw.	18.2	
11:51	996.7	14.5	57	wnw.	8.9	2,791	722.3	− 2.2	0.70	30	1.53	wnw.	18.2	2/10 St., w.
						2,750	726.3	− 2.0	.....	31	1.60	wnw.	18.0	Cloudless; dust gone.
						2,500	749.4	− 0.6	.....	38	2.21	wnw.	17.0	
						2,250	773.2	0.8	.....	45	2.91	wnw.	15.9	
						2,000	797.5	2.2	.....	51	3.65	wnw.	14.9	
A. M.														
12:38	997.5	13.9	56	wnw.	8.0	1,759	821.2	3.6	0.87	58	4.59	wnw.	13.9	Few Ci.St.
						1,750	822.4	4.4	.....	57	4.77	wnw.	14.1	
						1,500	847.8	5.9	.....	55	5.11	wnw.	14.4	
						1,250	874.0	8.0	.....	51	5.47	wnw.	15.0	
						1,000	900.8	10.2	.....	48	5.98	wnw.	15.5	
						750	928.5	12.4	.....	45	6.48	wnw.	16.0	
1:37	998.1	13.3	57	wnw.	7.2	556	950.2	14.1	−0.26	42	6.76	wnw.	16.4	
						500	956.8	14.0	.....	45	7.19	wnw.	15.0	
						250	985.9	13.3	.....	56	8.55	nw.	9.0	
1:42	998.2	13.0	61	nw.	6.3	141	998.2	13.0	.....	61	9.14	nw.	6.3	Few Ci.St.

November 17, 1918, series (No. 6).

A. M.														
2:30	999.2	12.7	61	nw.	6.7	141	999.2	12.7	.....	61	8.96	nw.	6.7	Few Ci.St.
						250	986.7	13.1	.....	57	8.60	nw.	9.5	
						500	957.5	14.0	.....	46	7.35	nw.	15.9	
2:32	999.2	12.7	61	nw.	6.7	531	953.9	14.1	−0.36	45	7.24	nw.	16.7	
						750	929.5	12.1	.....	46	6.50	nw.	17.9	
						1,000	902.5	9.7	.....	46	5.53	nw.	19.2	
						1,250	876.6	7.4	.....	47	4.84	nw.	20.6	
3:01	1,000.0	12.5	60	w.	7.6	1,301	870.4	6.9	0.94	47	4.68	nw.	20.8	
						1,500	850.2	5.9	.....	42	3.90	nw.	21.8	Cloudless.
						1,750	824.5	4.7	.....	35	2.99	nw.	23.0	
						2,000	799.5	3.5	.....	29	2.28	nw.	24.2	
3:30	1,000.0	12.0	63	nw.	7.2	2,030	796.1	3.4	0.48	28	2.18	nw.	24.3	
						2,250	775.0	1.3	.....	30	2.01	nw.	24.1	
						2,500	751.2	− 1.0	.....	32	1.80	nw.	24.0	
4:09	1,000.2	12.0	59	nw.	6.7	2,751	727.9	− 3.4	0.93	34	1.56	nw.	23.8	
						2,500	751.2	− 1.1	.....	31	1.73	nw.	23.5	
						2,250	775.0	1.2	.....	27	1.80	nw.	23.2	
						2,000	799.5	3.5	.....	24	1.88	nw.	23.0	
4:52	1,000.9	11.4	63	w.	5.4	1,777	821.6	5.5	0.19	21	1.90	nw.	22.7	
						1,750	824.5	5.6	.....	22	2.00	nw.	22.5	
						1,500	850.2	6.0	.....	35	3.27	nw.	21.0	
5:16	1,001.2	11.2	63	wnw.	5.8	1,258	875.8	6.5	0.88	47	4.55	nw.	19.6	
						1,250	876.6	6.6	.....	47	4.58	nw.	19.6	
						1,000	903.6	8.8	.....	46	5.21	wnw.	18.6	
						750	931.0	11.0	.....	45	5.91	wnw.	17.6	
5:45	1,001.5	10.7	67	w.	5.8	532	955.8	12.9	−0.56	44	6.55	w.	16.7	
						500	959.5	12.7	.....	46	6.76	w.	15.8	
						250	988.8	11.3	.....	59	7.90	w.	8.8	
5:53	1,001.6	10.7	65	w.	5.8	141	1,001.6	10.7	.....	65	8.37	w.	5.8	Cloudless.

November 17, 1918, series (No. 7).

A. M.														
6:35	1,002.1	10.2	69	nw.	5.4	141	1,002.1	10.2	.....	69	8.59	nw.	5.4	Cloudless.
						250	989.5	10.8	.....	63	8.16	nw.	8.8	
6:39	1,002.2	10.2	69	w.	5.4	476	962.7	12.1	−0.57	51	7.20	nw.	16.0	
						500	960.2	11.9	.....	51	7.10	nw.	16.1	
						750	931.8	9.9	.....	50	6.10	nnw.	16.7	
						1,000	904.0	7.8	.....	50	5.29	nnw.	17.3	
						1,250	877.2	5.8	.....	49	4.52	n.	18.0	
7:05	1,002.5	11.0	69	wnw.	5.8	1,269	875.2	5.6	0.82	49	4.46	n.	18.0	
						1,500	850.7	4.5	.....	43	3.62	nnw.	18.2	
						1,750	825.0	3.4	.....	37	2.89	nnw.	18.5	
						2,000	800.5	2.2	.....	31	2.22	nw.	18.8	
7:30	1,002.9	11.0	59	wnw.	6.3	2,132	787.1	1.6	0.47	28	1.92	nw.	18.9	
						2,250	776.0	0.4	.....	30	1.89	nw.	18.9	
						2,500	752.5	− 2.3	.....	34	1.71	nw.	18.9	
7:54	1,003.3	11.4	58	wnw.	6.7	2,590	743.7	− 3.2	0.94	36	1.68	nw.	18.9	
						2,500	752.5	− 2.4	.....	35	1.75	nw.	19.0	
						2,250	776.0	− 0.3	.....	33	1.97	nw.	19.2	
						2,000	800.7	1.8	.....	31	2.16	nw.	19.4	
						1,750	826.5	3.9	.....	29	2.34	nw.	19.5	
8:37	1,004.0	13.2	49	wnw.	7.6	1,686	833.1	4.4	0.62	28	2.34	nw.	19.6	
						1,500	852.5	5.5	.....	29	2.62	nw.	19.0	
						1,250	879.0	7.1	.....	31	3.13	nw.	18.1	
						1,000	906.3	8.6	.....	32	3.57	nw.	17.3	
9:08	1,004.5	14.3	44	wnw.	10.3	907	916.5	9.2	0.31	33	3.84	nw.	17.0	
						750	934.3	9.7	.....	35	4.21	nw.	15.7	
9:21	1,004.7	14.8	45	wnw.	10.7	517	960.8	10.4	1.17	39	4.92	nw.	13.8	
						500	963.0	10.6	.....	39	4.98	nw.	13.6	
						250	992.0	13.5	.....	43	6.65	wnw.	11.3	
9:27	1,004.8	14.8	45	wnw.	10.3	141	1,004.8	14.8	.....	45	7.57	wnw.	10.3	Cloudless.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 17, 1918, series (No. 8).

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°*C*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:05	1,005.1	15.3	41	nw.	8.5	141	1,005.1	15.3	.....	41	7.13	nw.	8.5	Cloudless.
						250	992.6	14.4	.....	41	6.72	nw.	9.7	
						500	963.0	12.4	.....	41	5.90	nw.	12.3	
						750	935.0	10.3	.....	42	5.26	nw.	15.0	
10:21	1,005.2	15.8	44	nw.	9.8	952	912.6	8.7	0.81	42	4.72	nw.	17.1	
						1,000	907.3	8.4	.....	42	4.63	nw.	17.4	
						1,250	880.0	6.6	.....	40	3.90	nw.	19.1	
						1,500	853.0	4.8	.....	39	3.35	nw.	20.8	
						1,750	827.3	3.0	.....	38	2.88	wnw.	22.5	
						2,000	802.5	1.2	.....	36	2.40	wnw.	24.2	
10:54	1,005.4	15.8	42	nw.	11.2	2,087	794.0	0.6	0.71	36	2.30	wnw.	24.8	
						2,250	778.4	−0.3	.....	33	1.97	wnw.	.....	
						2,500	754.5	−1.6	.....	27	1.44	wnw.	.....	
11:14	1,005.4	16.0	40	nw.	8.5	2,749	730.9	−3.0	0.55	22	1.04	wnw.	.....	
						2,500	754.5	−1.6	.....	21	1.12	wnw.	.....	
						2,250	778.4	−0.3	.....	20	1.19	wnw.	.....	
11:57	1,005.4	16.6	44	nw.	11.2	2,000	802.4	1.1	0.65	19	1.26	wnw.	18.8	
						1,750	827.3	2.7	.....	27	2.00	wnw.	16.5	
						1,500	853.0	4.3	.....	34	2.83	wnw.	18.2	
P. M.														
12:26	1,005.1	16.7	41	nw.	11.2	1,245	880.4	6.0	0.89	42	3.93	wnw.	17.9	
						1,000	907.3	8.2	.....	43	4.67	wnw.	15.8	
						750	935.0	10.4	.....	45	5.67	nw.	13.6	
						500	963.0	12.6	.....	46	6.71	nw.	11.4	
12:50	1,004.8	16.8	42	nw.	10.3	400	964.1	12.7	1.18	46	6.76	nw.	11.3	
						250	991.8	15.5	.....	43	7.57	nw.	10.6	
12:57	1,004.7	16.8	42	nw.	10.3	141	1,004.7	16.8	.....	42	8.03	nw.	10.3	Cloudless.

November 17, 1918, series (No. 9).

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
P. M.														
1:53	1,004.1	17.2	37	nw.	12.1	141	1,004.1	17.2	.....	37	7.26	nw.	12.1	Cloudless.
						250	991.6	15.9	.....	37	6.69	nw.	12.6	
						500	962.3	13.0	.....	36	5.39	nw.	13.9	
2:03	1,004.0	17.2	37	nw.	11.2	529	958.9	12.7	1.16	36	5.29	nw.	14.0	
						750	933.5	10.7	.....	37	4.76	nw.	14.5	
						1,000	905.6	8.5	.....	39	4.33	nw.	15.1	
						1,250	879.4	6.3	.....	40	3.82	nw.	15.7	
						1,500	853.3	4.1	.....	42	3.44	nw.	16.2	
2:31	1,004.2	17.5	37	nw.	8.9	1,571	845.5	3.5	0.88	42	3.30	nw.	16.4	
						1,750	827.0	2.3	.....	41	2.96	nw.	17.8	
						2,000	801.7	0.5	.....	38	2.41	nw.	19.7	
						2,250	776.9	−1.2	.....	36	1.99	nw.	21.6	
						2,500	753.0	−2.9	.....	34	1.63	nw.	23.6	
						2,750	730.0	−4.6	.....	32	1.33	nw.	25.5	
3:04	1,004.4	17.4	32	nw.	10.7	2,789	726.2	−4.9	0.61	32	1.30	nw.	25.8	
						2,750	730.0	−4.7	.....	32	1.32	nw.	25.5	
						2,500	753.0	−3.4	.....	29	1.33	nw.	23.5	
						2,250	776.9	−2.1	.....	27	1.39	nw.	21.5	
3:33	1,004.4	17.4	34	nw.	8.5	2,213	780.7	−1.9	0.88	27	1.41	nw.	21.2	
						2,000	801.7	0.0	.....	35	2.14	nw.	18.5	
						1,750	827.0	2.1	.....	45	3.20	nw.	15.3	
3:45	1,004.4	17.4	34	nw.	8.9	1,676	835.1	2.8	0.99	48	3.59	nw.	14.4	
						1,500	853.3	4.5	.....	47	3.96	nw.	14.0	
						1,250	879.8	7.0	.....	45	4.51	nw.	13.4	
						1,000	906.6	9.5	.....	43	5.10	nw.	12.9	
4:04	1,004.4	17.2	33	nw.	10.3	976	909.3	9.7	0.86	43	5.17	nw.	12.8	
						750	934.4	11.6	.....	37	5.05	nw.	13.2	
4:18	1,004.4	17.2	30	nw.	8.9	533	958.9	13.5	0.94	32	4.95	nw.	13.5	
						500	962.3	13.8	.....	32	5.05	nw.	13.2	
						250	991.6	16.2	.....	31	5.71	nw.	10.5	
4:25	1,004.4	17.2	30	nw.	9.4	141	1,004.4	17.2	.....	30	5.89	nw.	9.4	Cloudless.

November 18, 1918.

Time.	Surface. Pressure.	Surface. Temperature.	Surface. Relative humidity.	Surface. Wind. Dir.	Surface. Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:11	1,006.5	7.2	54	nw.	5.4	141	1,006.5	7.2	.....	54	5.49	nw.	5.4	Cloudless.
						250	993.9	8.6	.....	46	5.13	nw.	10.3	
7:16	1,006.6	7.3	54	nw.	5.4	383	977.6	10.2	−1.24	37	4.61	nnw.	16.2	
						500	964.0	9.5	.....	36	4.27	nnw.	16.3	
						750	935.0	8.1	.....	33	3.56	nnw.	16.5	
						1,000	907.5	6.7	.....	30	2.94	nnw.	16.7	
7:31	1,006.8	7.6	54	wnw.	4.9	1,016	905.6	6.6	0.57	30	2.92	nnw.	16.7	
						1,250	880.5	7.2	.....	25	2.54	nnw.	17.4	
						1,500	854.0	7.9	.....	20	2.13	nnw.	18.2	
7:39	1,007.1	8.8	44	nw.	5.4	1,603	843.6	8.2	−0.27	*18	1.96	nnw.	18.5	
						1,750	828.0	7.5	.....	*18	1.87	nnw.	18.5	
						2,000	802.9	6.2	.....	*18	1.71	nnw.	18.5	
						2,250	778.7	4.9	.....	*18	1.56	n.	18.5	
						2,500	755.7	3.7	.....	*18	1.43	n.	18.5	
						2,750	733.5	2.4	.....	*18	1.31	n.	18.5	
8:51	1,007.4	11.3	36	nnw.	5.8	2,872	722.8	1.8	0.54	*18	1.25	n.	18.5	Few A.St., w.
						2,750	734.3	2.5	.....	*18	1.32	n.	18.5	
						2,500	757.4	5.5	.....	*18	1.63	n.	18.6	
						2,250	781.7	5.3	.....	*18	1.60	n.	18.7	
10:02	1,007.8	12.5	35	nnw.	6.3	2,061	799.1	6.4	0.42	*18	1.73	n.	18.7	
						2,000	806.0	6.7	.....	*18	1.77	n.	18.7	
						1,750	830.4	7.7	.....	*18	1.89	n.	18.6	
						1,500	855.4	9.2	.....	*18	2.10	nne.	18.5	

*Relative humidity below 18 per cent.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 18, 1918—Continued.

Time.	Surface. Pressure	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure	Temperature.	Δ t / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
10:40	1,007.8	13.5	34	nne.	6.3	1,293	877.0	0.6	−0.61	*18	2.15	nne.	18.5	
						1,250	882.0	0.3		*18	2.11	nne.	17.8	
						1,000	909.0	7.8		*18	1.90	nnw.	13.6	
10:48	1,007.8	13.5	34	nnw.	7.2	979	911.0	7.7	0.40	*18	1.89	nnw.	13.2	
						750	936.5	8.6		21	2.35	nnw.	10.7	
						500	965.3	9.6		24	2.87	nnw.	7.9	
11:02	1,007.8	15.8	36	nw.	4.9	475	968.1	9.7	1.29	24	2.89	nnw.	7.6	
						250	995.0	12.6		31	4.52	nnw.	6.1	
11:07	1,007.8	14.0	34	nnw.	5.4	141	1,007.8	14.0		34	5.43	nnw.	5.4	

November 20, 1918.

Time.	Surface. Pressure	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure	Temperature.	Δ t / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:44	997.8	14.5	88	se.	2.2	141	997.8	14.5		88	14.53	se.	2.2	8/10 Ci.St., w.; few St.Cu., s.; 1/10 St., s.
						250	984.5	15.5		83	15.50	se.	6.6	
7:49	997.8	14.6	88	se.	2.2	433	933.8	17.2	−0.92	87	17.07	sse.	14.2	
						500	956.0	16.8		87	16.84	sse.	13.7	
						750	928.5	15.1		80	13.27	s.	12.0	
						1,000	902.0	13.4		90	13.83	ssw.	10.2	
8:03	997.9	15.0	88	se.	3.1	1,023	899.4	13.2	0.65	90	13.65	ssw.	10.0	Altitude of St. base about 950 m.
						1,250	875.9	11.7		88	12.10	ssw.	8.9	
						1,500	850.5	10.0		86	10.56	ssw.	7.8	
						1,750	826.0	8.3		84	9.20	ssw.	6.6	8/10 Ci.St., w.; 1/10 St.Cu., s.; 1/10 St., s.
9:02	998.6	17.3	84	se.	3.6	1,861	815.0	7.5	0.68	83	8.61	ssw.	6.1	
						2,000	801.8	6.7		80	7.85	ssw.	5.8	Faint solar halo, 22° radius, from 8:30 to 8:45 a. m.
						2,250	777.7	5.1		74	6.50	ssw.	5.1	
						2,500	754.0	3.6		69	5.46	ssw.	4.5	5/10 Ci.St., w.; 4/10 St.Cu., s.; 1/10 St., s.
9:49	999.2	18.1	81	ese.	4.0	2,568	747.8	3.2	0.60	67	5.15	ssw.	4.3	Altitude of St. base about 750 m.
						2,500	754.0	3.6		71	5.69	ssw.	4.6	10/10 St. Cu., s.
10:24	999.4	19.6	81	s.	6.7	2,235	776.1	5.0	0.77	87	7.59	sw.	5.0	
						2,250	777.7	6.2		87	8.25	sw.	6.5	8/10 St.Cu., s.; few St., s.
						2,000	801.8	7.6		87	9.03	sw.	7.2	9/10 St.Cu., s.; 1/10 St., s.
						1,750	826.2	9.0		87	9.99	ssw.	8.8	
						1,500	852.0	10.9		87	11.31	ssw.	10.2	
10:56	999.6	23.1	81	s.	4.9	1,385	853.7	11.8	0.63	87	12.04	ssw.	10.9	1/10 Ci.St., w.; 4/10 St.Cu., s.; 4/10 St., s.
						1,250	878.0	12.7		87	12.78	ssw.	10.8	
						1,000	904.0	14.2		88	14.25	ssw.	10.6	Altitude of St. base about 900 m.
						750	930.9	15.8		88	15.80	s.	10.5	
11:23	999.1	21.0	78	s.	5.6	534	954.5	17.2	1.62	89	17.46	s.	10.3	
						500	958.2	17.5		88	17.80	s.	9.9	
						250	986.0	20.1		81	19.06	sse.	7.0	
11:26	999.9	21.2	78	sse.	5.8	141	998.9	21.2		78	19.64	sse.	5.8	

November 21, 1918.

Time.	Surface. Pressure	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure	Temperature.	Δ t / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:24	1,005.5	7.0	87	n.	13.0	141	1,005.5	7.0		87	8.72	n.	13.0	10/10 St., n.
						250	992.5	5.8		89	8.21	n.	14.2	
						500	962.6	2.9		93	7.00	nnw.	17.1	
7:36	1,005.7	6.8	86	n.	10.7	586	952.3	1.9	1.15	94	6.59	nnw.	18.1	
						750	933.5	3.9		90	7.27	nnw.	14.8	
8:03	1,006.1	6.8	83	n.	9.8	976	908.2	0.7	−1.23	84	8.24	nnw.	10.3	
						1,000	905.7	0.7		84	8.24	nnw.	10.2	
						1,250	878.7	0.3		84	8.02	nnw.	8.9	Altitude of St. base about 550 m.
9:05	1,006.4	6.8	82	n.	12.5	1,342	858.9	6.2	0.34	84	7.96	nnw.	8.4	
						1,250	878.7	6.5		83	8.03	nnw.	9.3	
10:04	1,006.8	7.0	80	n.	10.3	1,029	902.8	7.3	−0.17	81	8.29	n.	11.4	
						1,000	905.7	6.8		82	8.10	n.	11.3	
						750	934.5	2.5		94	6.87	n.	10.1	
10:20	1,007.0	7.1	79	n.	9.8	676	943.0	1.3	0.63	98	6.58	n.	9.8	
10:28	1,007.1	7.2	79	n.	8.0	502	963.5	2.4	1.33	97	7.04	n.	11.0	
						250	994.0	5.8		84	7.74	n.	11.4	
10:37	1,007.2	7.2	79	n.	11.6	141	1,007.2	7.2		79	8.03	n.	11.6	

November 22, 1918.

Time.	Surface. Pressure	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure	Temperature.	Δ t / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.														
7:19	1,009.5	4.2	75	n.	8.9	141	1,009.5	4.2		75	6.19	n.	8.9	10/10 St., ne.
						250	996.4	3.2		77	5.92	n.	9.1	
						500	965.8	1.0		81	5.32	nne.	9.5	
7:34	1,009.5	4.2	75	nne.	8.5	727	938.8	−1.1	0.90	85	4.73	nne.	9.6	
						750	936.4	−1.0		86	4.83	nne.	9.4	Altitude of St. base about 700 m.
						1,000	907.4	−0.1		92	5.58	nne.	5.2	
8:53	1,009.8	3.8	74	n.	9.4	1,014	905.8	−0.1	−0.35	92	5.58	nne.	5.0	Rain began 8:53 a. m., changed to snow and rain 8:55 a. m., and continued to end of flight.
						1,250	879.7	0.1		90	5.54	nne.	4.4	
						1,500	853.0	0.3		88	5.49	nne.	3.8	
9:16	1,009.8	2.4	93	n.	8.0	1,671	834.9	0.5	−0.10	96	5.44	nne.	3.3	
						1,500	853.0	0.7		98	5.66	nne.	4.2	
						1,250	879.7	1.0		93	6.04	nne.	5.6	
10:00	1,009.8	2.5	95	n.	8.5	1,176	887.8	1.1	−1.00	93	6.16	nne.	5.9	
10:07	1,009.8	2.5	96	n.	8.5	1,160	883.6	−0.5	0.18	98	5.74	nne.	5.9	
						1,000	907.4	−0.2		98	5.89	nne.	5.9	
						750	936.4	0.2		97	6.01	n.	6.0	
						500	965.8	0.7		96	6.17	n.	6.0	
10:21	1,009.9	2.4	96	n.	8.9	383	980.0	0.9	0.58	95	6.26	n.	6.0	
						250	996.4	1.7		95	6.63	n.	7.4	
10:26	1,009.9	2.3	96	n.	8.5	141	1,009.9	2.3		96	6.92	n.	8.5	10/10 St., n.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 23, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
7:17	1,011.8	2.8	78	nne.	6.3	141	1,011.8	2.8	.....	78	5.83	nne.	6.3	10/10 St., n.
						250	998.0	1.6	.....	80	5.49	nne.	8.0	
						500	967.4	−1.0	.....	84	4.72	nne.	11.8	
7:29	1,011.8	2.8	76	nne.	6.7	507	966.7	−1.1	1.07	84	4.68	nne.	11.9	
						750	937.2	−2.2	.....	81	4.12	nne.	11.1	
						1,000	908.2	−3.4	.....	77	3.54	nne.	10.2	
						1,250	880.0	−4.6	.....	74	3.07	nne.	9.3	
8:07	1,011.9	2.9	76	nne.	8.0	1,368	867.4	−5.1	0.47	72	2.87	nne.	8.9	
8:25	1,012.1	2.8	78	nne.	8.0	1,451	858.6	2.2	−8.80	69	4.94	nne.	7.8	
9:23	1,012.5	2.9	78	nne.	6.7	1,500	853.3	1.7	.....	70	4.84	nne.	6.8	Average altitude of St. base about 850 m.
						1,601	843.0	0.8	0.65	73	4.72	nne.	4.8	
						1,500	853.3	1.2	.....	67	4.46	nne.	6.0	
9:39	1,012.5	2.8	76	nne.	8.9	1,437	860.4	1.4	−3.86	63	4.26	ne.	6.7	
9:44	1,012.5	3.0	74	nne.	7.6	1,261	879.7	−5.4	0.20	80	3.10	nne.	9.0	
						1,250	880.9	−5.4	.....	78	3.03	nne.	8.8	
9:55	1,012.5	3.0	75	nne.	8.5	1,212	885.0	−5.3	0.54	73	2.85	nne.	8.3	
						1,000	908.8	−4.2	.....	77	3.31	nne.	8.5	
						750	937.8	−2.8	.....	81	3.92	nne.	8.7	
						500	968.0	−1.5	.....	85	4.58	nne.	9.0	
10:37	1,012.5	3.2	74	nne.	8.5	451	974.2	−1.2	1.45	86	4.76	nne.	9.0	
						250	999.0	1.7	.....	79	5.46	nne.	8.7	
10:49	1,012.5	3.3	74	nne.	8.5	141	1,012.5	3.3	.....	74	5.73	nne.	8.5	Overcast.

November 26, 1918.

P. M.														
2:20	1,006.2	4.0	92	ne.	5.8	141	1,006.2	4.0	.....	92	7.48	ne.	5.8	10/10 St., ne.
						250	992.0	3.0	.....	96	7.28	.....	5.5	Altitude of St. base about 300 m.
2:40	1,005.9	4.1	92	ne.	4.5	308	985.0	2.4	1.02	98	7.11	.....	5.3	
						250	992.0	3.0	.....	96	7.28	.....	5.0	
3:08	1,005.7	4.2	92	ne.	4.5	141	1,005.7	4.2	.....	92	7.59	ne.	4.5	

November 27, 1918.

P. M.														
2:02	991.5	5.5	94	nw.	6.7	141	991.5	5.5	.....	94	8.49	nw.	6.7	10/10 St., nw.
						250	978.1	4.5	.....	96	8.08	nw.	7.7	Raining throughout flight, rendering the attaining of higher altitude impossible.
2:15	991.5	5.4	95	nw.	6.3	458	953.6	2.6	0.90	100	7.37	nw.	9.7	
						250	978.1	4.4	.....	96	8.04	nw.	5.7	Altitude of St.Cu. base about 400 m.
2:31	991.5	5.4	94	nw.	3.6	141	991.5	5.4	.....	94	8.43	nw.	3.6	10/10 Nb., nw.

November 28, 1918.

A. M.														
7:36	994.5	1.7	88	wsw.	4.0	141	994.5	1.7	.....	88	6.08	wsw.	4.0	1/10 A.St., n
						250	981.3	1.8	.....	83	5.78	w.	6.9	
						500	951.4	2.0	.....	70	4.94	wnw.	13.5	
7:48	994.7	2.3	85	wsw.	4.0	540	946.8	2.0	−0.08	68	4.80	wnw.	14.6	
						750	923.0	4.9	.....	53	4.59	wnw.	14.0	
7:58	994.9	2.7	84	w.	5.4	833	913.6	6.1	−1.40	47	4.43	wnw.	13.7	
						1,000	895.0	5.9	.....	44	4.09	wnw.	14.1	
						1,250	868.2	5.5	.....	40	3.61	nw.	14.7	
8:15	995.1	3.7	80	w.	5.4	1,434	849.1	5.3	0.13	37	3.30	nw.	15.1	
						1,500	842.4	5.1	.....	35	3.08	nw.	15.2	
						1,750	818.0	4.4	.....	29	2.43	wnw.	15.4	
						2,000	792.3	3.7	.....	22	1.75	wnw.	15.6	
8:34	995.3	4.4	79	wsw.	5.8	2,036	788.8	3.6	0.28	21	1.66	wnw.	15.6	
						2,250	768.0	2.7	.....	20	1.48	wnw.	16.1	
						2,500	744.9	1.7	.....	19	1.31	wnw.	16.6	
						2,750	722.5	0.7	.....	17	1.09	wnw.	17.1	
8:53	995.6	4.8	75	wsw.	5.8	2,844	714.1	0.3	0.41	*17	1.06	wnw.	17.3	
						3,000	700.2	−0.6	.....	*17	0.99	wnw.	19.0	
9:12	995.7	5.3	72	wsw.	6.3	3,237	679.9	−1.9	0.52	*17	0.89	w.	21.6	
						3,000	700.2	−0.8	.....	*17	0.97	wnw.	19.2	
9:32	995.8	5.7	69	wsw.	7.6	2,774	720.6	0.3	0.55	*17	1.06	wnw.	16.9	
						2,750	722.5	0.4	.....	*17	1.07	wnw.	16.7	
						2,500	745.1	1.8	.....	*17	1.18	wnw.	14.7	
						2,250	769.0	3.2	.....	*17	1.31	wnw.	12.7	
9:52	995.9	6.2	68	w.	8.0	2,114	782.1	3.9	0.26	*17	1.37	wnw.	11.6	
						2,000	793.1	4.2	.....	18	1.48	wnw.	11.3	
						1,750	818.5	4.8	.....	22	1.89	wnw.	10.8	
						1,500	842.4	5.5	.....	25	2.26	wnw.	10.2	
						1,250	868.9	6.1	.....	28	2.64	wnw.	9.7	
						1,000	896.0	6.8	.....	31	3.06	wnw.	9.1	
10:20	995.9	6.8	69	w.	5.8	944	902.6	6.9	−0.78	32	3.18	wnw.	9.0	
						750	924.1	5.4	.....	42	3.77	wnw.	8.4	
						500	953.0	3.4	.....	55	4.29	wnw.	7.6	
10:30	995.9	7.2	67	w.	6.3	456	958 0	3.1	1.37	57	4.35	wnw.	7.5	
						250	982.5	5.9	.....	63	5.85	w.	6.4	
10.37	995.9	7.4	66	w.	5.8	141	995.9	7.4	.....	66	6.80	w.	5.8	

* Relative humidity below 17 per cent.

TABLE 16.—*Free-air data from kite flights at Groesbeck Aerological Station, November, 1918*—Continued.

November 29, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:30	1,002.6	3.0	87	nnw.	4.5	141	1,002.6	3.0	.....	87	6.59	nnw.	4.5	2/10 A.St., nsw.
						250	989.5	3.8	.....	79	6.34	n.	7.6	
7:34	1,002.6	2.9	88	n.	4.9	336	978.8	4.4	−0.72	72	6.03	n.	10.0	
						500	960.0	3.7	.....	73	5.81	n.	9.0	
						750	930.6	2.7	.....	75	5.56	nne.	7.5	
7:53	1,002.7	3.0	87	nne.	4.5	817	922.8	2.4	0.42	75	5.44	nne.	7.1	
						1,000	902.0	3.0	.....	48	3.64	n.	6.4	Few Cl., w.; few A.Cu., w.; 3/10 A.St., w.
9:01	1,003.0	4.3	85	nne.	4.5	1,159	884.8	3.6	−0.35	24	1.90	nnw.	5.7	
						1,250	874.4	3.3	.....	25	1.94	nnw.	5.4	Few A.Cu., w.; 4/10 A.St., w.
9:55	1,003.4	6.2	76	ne.	4.9	1,479	851.1	2.4	0.39	27	1.96	n.	4.8	
10:35	1,003.2	7.8	73	ne.	4.0	1,329	867.0	3.0	0.49	27	2.06	nne.	8.9	
						1,250	875.0	3.4	.....	27	2.11	nne.	9.5	2/10 A.Cu., w.; 2/10 A.St., w.
10:39	1,003.1	8.0	72	ne.	4.0	1,147	883.6	3.9	−0.02	26	2.10	nne.	10.2	Brilliant parhelion from 7:54 to 8:00 a. m.
						1,000	902.0	3.9	.....	36	2.91	nne.	9.7	
						750	930.6	3.8	.....	54	4.33	ne.	8.9	
						500	960.0	3.8	.....	72	5.77	ne.	8.0	
10:55	1,003 0	8.6	66	ne.	5.8	485	961.8	3.8	1.40	73	5.85	ne.	8.0	
						250	990.5	7.1	.....	68	6.85	ne.	6.8	
11:00	1,003.0	8.6	65	ne.	6.3	141	1,003.0	8.6	.....	65	7.20	ne.	6.3	

November 30, 1918.

A. M.														
7:22	1,009.6	4.9	76	n.	5.4	141	1,009.6	4.9	.....	76	6.58	n.	5.4	9/10 A.St., w.
						250	996.4	4.6	.....	71	6.02	n.	8.3	
7:28	1,009.8	4.8	75	nne.	5.8	482	968.3	4.1	0.23	60	4.91	nne.	14.4	
						500	966.0	4.0	.....	59	4.80	nne.	14.2	
						750	937.2	2.9	.....	50	3.76	nne.	11.8	
7:57	1,010.4	4.7	77	nne.	5.4	931	916.8	2.1	0.45	43	3.06	nne.	10.1	10/10 A.St., w.
						1,000	909.5	1.7	.....	43	2.97	nne.	9.9	
						1,250	882.0	0.4	.....	42	2.64	n.	9.2	
8:20	1,010.7	4.9	75	n.	5.9	1,351	870.5	−0.2	0.55	42	2.52	n.	8.9	
						1,500	854.8	−0.5	.....	45	2.64	n.	8.4	
						1,750	828.4	−1.0	.....	51	2.87	nnw.	7.5	
9:02	1,011.2	5.0	75	n.	5.8	1,881	815.1	−1.2	0.19	54	2.93	nnw.	7.0	
						2,000	803.0	−1.9	.....	60	3.13	nnw.	7.4	
10:32	1,011.5	6.0	68	n.	7.2	2,233	779.8	−3.2	0.46	71	3.32	nnw.	8.1	
						2,000	803.0	−2.4	.....	59	2.95	nnw.	7.7	
						1,750	828.4	−1.6	.....	46	2.46	nnw.	7.3	
10:51	1,011.5	6.4	65	n.	6.3	1,730	830.5	−1.5	0.33	45	2.43	nnw.	7.3	
						1,500	854.8	−0.7	.....	41	2.36	n.	8.6	
11:03	1,011.4	6.6	64	n.	6.3	1,372	868.7	−0.2	0.30	39	2.31	n.	9.3	
						1,250	882.0	0.2	.....	40	2.48	n.	9.5	
						1,000	910.0	0.9	.....	41	2.67	nne.	9.8	
11:14	1,011.2	6.8	60	n.	5.8	969	913.2	1.0	0.50	41	2.69	nne.	9.8	2/10 A.Cu., w.; 3/10 A.St., w.
						750	938.4	2.1	.....	50	3.56	nne.	8.7	
						500	967.8	3.4	.....	59	4.60	n.	7.4	
11:25	1,010.9	7.4	63	n.	5.4	431	975.7	3.7	1.17	62	4.94	n.	7.1	
						250	998.0	5.8	.....	61	5.62	n.	6.3	
11:30	1,010.8	7.1	60	n.	5.8	141	1,010.8	7.1	.....	60	6.05	n.	5.8	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918.*

December 2, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:33	1,007.6	4.0	91	n.	3.6	141	1,007.6	4.0	.....	91	7.40	n.	3.6	1/10 A.St., wnw.
						250	993.8	4.9	.....	86	7.71	n.	5.8	
						500	964.0	7.0	.....	84	7.41	nne.	10.8	
7:43	1,007.7	4.0	91	n.	4.0	540	959.7	7.3	−0.83	72	7.37	nne.	11.6	
						750	935.5	5.8	.....	73	6.73	n.	10.4	
						1,000	907.1	4.0	.....	75	6.10	n.	11.1	
						1,250	880.0	2.1	.....	76	5.40	nnw.	10.8	
8:11	1,008.0	4.7	86	n.	4.0	1,335	867.8	1.3	0.73	77	5.17	nnw.	10.7	
						1,500	853.2	0.7	.....	76	4.89	nnw.	10.7	1/10 A.Cu., wnw.; few A.St., wnw.
						1,750	827.0	− 0.3	.....	75	4.47	nnw.	10.7	
						2,000	802.1	− 1.3	.....	73	4.09	nnw.	10.6	
8:53	1,008.6	6.3	82	n.	3.6	2,204	782.4	− 2.2	0.42	72	3.66	nnw.	10.6	
						2,250	777.8	− 2.4	.....	71	3.55	nnw.	10.7	
						2,500	754.0	− 3.2	.....	63	2.95	nnw.	11.1	
						2,750	731.0	− 4.1	.....	55	2.38	nnw.	11.5	
						3,000	708.3	− 5.0	.....	47	1.88	nnw.	12.0	4/10 A.Cu., wnw.; few A.St., wnw.
						3,250	686.1	− 5.9	.....	39	1.45	nnw.	12.4	
						3,500	664.7	− 6.8	.....	31	1.07	nnw.	12.8	
						3,750	643.5	− 7.6	.....	24	0.77	nnw.	13.3	
10:03	1,008.4	10.2	69	n.	4.5	3,771	641.9	− 7.7	0.35	23	0.73	nnw.	13.3	6/10 A.Cu., wnw.
						4,000	622.9	− 9.0	.....	.....	.....	nnw.	14.5	
						4,250	603.0	−10.4	.....	.....	.....	nw.	15.8	
						4,500	583.5	−12.8	.....	.....	.....	nw.	17.2	
						4,750	564.5	−13.2	.....	.....	.....	wnw.	18.5	
10:31	1,008.2	10.9	67	nne.	4.5	4,920	552.1	−14.1	0.43	.....	.....	w.	19.4	Few Cl.Cu., w.; 3/10 A.Cu., wnw.; 2/10 St.Cu., wnw.
						4,750	564.5	−13.6	.....	.....	.....	w.	18.8	
						4,500	583.1	−12.8	.....	.....	.....	wnw.	18.0	Few Cl.Cu., w.; 1/10 A.Cu., wnw.; 1/10 A.St., wnw.
						4,250	602.2	−12.1	.....	.....	.....	wnw.	17.1	
						4,000	621.8	−11.3	.....	.....	.....	wnw.	16.2	
						3,750	641.9	−10.6	.....	.....	.....	nw.	15.4	
11:42	1,008.3	11.5	61	n.	4.5	3,529	660.8	− 9.9	0.47	19	0.59	nw.	14.6	Few Cl.Cu., w.; 2/10 A.St., wnw.
						3,500	662.7	− 9.8	.....	19	0.59	nw.	14.5	
						3,250	684.1	− 8.6	.....	19	0.55	nw.	13.7	
						3,000	706.3	− 7.5	.....	19	0.61	nnw.	12.9	
						2,750	729.5	− 6.3	.....	19	0.68	nnw.	12.0	
						2,500	753.5	− 5.1	.....	19	0.76	nnw.	11.2	
P. M.														
12:01	1,008.4	12.0	58	n.	4.0	2,476	755.9	− 5.0	0.57	19	0.76	nnw.	11.1	
						2,250	777.8	− 3.7	.....	20	0.90	nnw.	10.1	
						2,000	802.6	− 2.3	.....	20	1.01	n.	9.0	
						1,750	828.2	− 0.9	.....	21	1.19	n.	7.9	
12:17	1,008.3	12.2	58	nne.	4.5	1,688	834.8	− 0.5	0.89	21	1.23	n.	7.6	
						1,500	854.5	1.2	.....	23	1.53	n.	7.3	
						1,250	881.2	3.4	.....	25	1.95	nne.	6.8	
12:27	1,008.3	12.5	56	nne.	3.1	1,180	889.0	4.0	0.82	26	2.11	nne.	6.7	
						1,000	908.2	5.1	.....	30	2.64	nne.	6.2	
						750	935.6	7.5	.....	38	3.94	nne.	5.2	
						500	964.0	9.6	.....	46	5.50	n.	4.3	
						250	994.2	11.6	.....	53	7.24	n.	3.5	
12:37	1,008.2	12.5	56	n.	3.1	141	1,008.2	12.5	.....	56	8.11	n.	3.1	2/10 A.St., wnw.

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A. M.														
7:16	1,009.4	1.8	86	sw.	3.6	141	1,009.4	1.8	.....	86	5.99	sw.	3.6	Few A.St., nw.
						250	995.5	4.1	.....	74	6.06	sw.	6.1	
7:21	1,009.4	1.8	86	sw.	3.6	493	966.9	9.1	−2.07	47	5.43	wsw.	11.8	
						500	966.0	9.1	.....	47	5.43	wsw.	11.8	
						750	937.0	8.1	.....	39	4.21	wsw.	11.8	
						1,000	909.1	7.1	.....	32	3.23	w.	11.8	
						1,250	882.2	6.1	.....	24	2.26	w.	11.8	
7:49	1,009.2	2.6	85	sw.	4.0	1,393	866.8	5.5	0.40	20	1.81	w.	11.8	
						1,500	855.9	6.1	.....	19	1.79	w.	11.3	
						1,750	830.4	7.5	.....	16	1.66	w.	10.3	
						2,000	805.5	8.9	.....	13	1.48	w.	9.2	
8:16	1,008.9	4.5	76	sw.	5.8	2,027	802.8	9.0	−0.55	*13	1.49	w.	9.1	
						2,250	781.0	7.7	.....	*13	1.37	w.	9.2	
						2,500	757.4	6.2	.....	*13	1.23	w.	9.2	
						2,750	734.7	4.7	.....	*13	1.11	w.	9.3	
						3,000	712.8	3.2	.....	*13	1.00	w.	9.4	
8:52	1,008.5	6.3	66	sw.	4.9	3,144	700.2	2.4	0.62	*13	0.94	w.	9.4	
						3,000	712.8	3.3	.....	*13	1.01	w.	9.6	
						2,750	734.7	5.0	.....	*13	1.13	w.	9.8	
9:16	1,008.4	8.0	61	sw.	5.4	2,574	750.9	6.1	0.55	*13	1.22	w.	10.0	
						2,500	757.4	6.5	.....	*13	1.26	w.	10.2	
						2,250	781.0	7.9	.....	*13	1.38	w.	10.9	
						2,000	805.5	9.3	.....	*13	1.52	w.	11.6	
9:39	1,008.4	9.6	55	sw.	5.8	1,941	811.3	9.6	−0.45	*13	1.55	w.	11.8	
						1,750	830.4	8.7	.....	*13	1.46	w.	12.8	
						1,500	855.9	7.6	.....	*13	1.36	w.	14.2	
9:47	1,008.4	9.8	55	sw.	5.8	1,478	858.0	7.5	0.24	*13	1.35	w.	14.3	
						1,250	882.2	8.0	.....	13	1.39	w.	13.7	
						1,000	909.1	8.7	.....	14	1.58	wsw.	13.1	
10:04	1,008.4	10.2	55	sw.	8.0	980	911.5	8.7	0.77	14	1.58	wsw.	13.0	
						750	937.0	10.5	.....	15	1.90	sw.	13.4	
10:17	1,008.3	10.2	50	sw.	9.8	536	961.3	12.1	−3.57	15	2.12	sw.	13.7	
						500	965.7	10.8	.....	16	2.07	sw.	11.4	
10:20	1,008.3	10.3	51	sw.	8.5	438	972.6	8.6	0.57	19	2.12	sw.	7.5	
						250	995.0	9.7	.....	40	4.81	sw.	7.6	
10:22	1,008.3	10.3	52	sw.	7.6	141	1,008.3	10.3	.....	52	6.52	sw.	7.6	Few A.St., nw.

*Relative humidity below this value.

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 3, 1918 (No. 2).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
11:19	1,006.4	12.0	54	sw.	4.9	141	1,006.4	12.0	.....	54	7.58	sw.	4.9	Few A.St., nw.
						250	993.5	11.2	.....	52	6.92	sw.	5.7	
						500	964.0	9.5	.....	49	5.82	wsw.	7.6	
11:34	1,006.4	12.6	50	sw.	6.7	546	958.6	9.2	0.69	48	5.59	wsw.	7.9	
						750	935.0	9.2	.....	40	4.66	wsw.	9.3	
						1,000	906.9	9.1	.....	31	3.58	wsw.	10.9	
						1,250	880.0	9.0	.....	22	2.53	w.	12.6	
P. M.														
12:01	1,006.4	13.3	47	sw.	6.7	1,457	859.0	9.0	0.02	14	1.61	w.	14.0	Few Cl., nw.; few A.St., nw.
						1,500	854.0	9.0	.....	14	1.61	w.	13.9	
						1,750	829.0	9.1	.....	11	1.27	w.	13.6	
						2,000	804.7	9.2	.....	9	1.05	w.	13.2	
12:16	1,006.2	14.0	45	sw.	6.3	2,115	783.6	9.3	−0.05	8	0.94	w.	13.0	
						2,250	780.5	8.3	.....	8	0.88	w.	13.1	
						2,500	756.9	6.3	.....	8	0.76	w.	13.3	
						2,750	734.4	4.4	.....	7	0.59	w.	13.5	1/10 Cl.St., nw.
12:40	1,005.9	14.5	46	sw.	6.7	2,939	717.5	2.9	0.78	7	0.53	w.	13.6	
						3,000	712.4	3.3	.....	8	0.62	w.	12.9	
12:46	1,005.9	14.6	45	sw.	6.3	3,091	704.5	3.8	−0.59	9	0.72	wnw.	11.8	
						3,250	691.3	2.9	.....	10	0.75	wnw.	13.1	
						3,500	670.4	1.5	.....	12	0.82	wnw.	15.1	
1:04	1,005.6	15.2	45	sw.	7.6	3,593	662.7	1.0	0.60	13	0.85	wnw.	15.8	
						3,500	670.4	1.6	.....	13	0.89	wnw.	15.3	
						3,250	691.3	3.2	.....	14	1.08	wnw.	14.0	
						3,000	712.7	4.8	.....	14	1.20	wnw.	12.7	
1:21	1,005.2	15.9	45	sw.	9.4	2,987	714.2	4.9	0.85	14	1.21	wnw.	12.6	4/10 Cl.St., nw.
						2,750	734.2	6.2	.....	13	1.23	wnw.	13.0	
						2,500	757.1	7.6	.....	12	1.25	wnw.	13.4	
						2,250	780.7	9.0	.....	10	1.15	wnw.	13.8	
1:41	1,004.8	16.3	44	sw.	9.4	2,189	786.9	9.3	0.59	10	1.17	wnw.	13.9	
						2,000	804.7	10.4	.....	9	1.13	wnw.	14.4	
1:58	1,004.4	16.4	44	sw.	8.0	1,765	827.7	11.8	−1.39	7	0.97	wnw.	15.0	
						1,750	829.0	11.6	.....	7	0.96	wnw.	15.1	
2:01	1,004.4	16.4	44	sw.	9.8	1,643	839.8	10.1	0.73	6	0.74	wnw.	15.5	
						1,500	854.0	11.1	.....	6	0.79	wnw.	14.9	
						1,250	880.0	12.9	.....	6	0.89	w.	13.7	
2:25	1,004.1	16.2	43	wsw.	8.5	1,062	899.9	14.3	−1.30	6	0.98	w.	12.9	
						1,000	906.7	13.5	.....	7	1.08	w.	12.7	
2:27	1,004.1	16.3	43	wsw.	8.5	878	919.8	11.9	0.20	9	1.25	wsw.	12.2	
						750	934.0	12.2	.....	13	1.85	wsw.	10.7	
2:35	1,004.0	16.8	42	sw.	7.2	581	953.0	12.5	0.98	18	2.61	sw.	8.8	
						500	962.3	13.3	.....	22	3.36	sw.	8.2	
						250	991.0	15.7	.....	35	6.24	sw.	6.5	
2:42	1,003.9	16.8	40	sw.	5.8	141	1,003.9	16.8	.....	40	7.65	sw.	5.8	Few Cl.St., nw.

December 3, 1918 (No. 3).

P. M.														
3:25	1,003.7	17.2	44	sw.	7.6	141	1,003.7	17.2	.....	44	8.63	sw.	7.6	Few Cl.St., nw.
						250	991.0	15.8	.....	44	7.90	sw.	8.0	
3:35	1,003.7	17.3	41	ssw.	6.7	505	961.5	13.0	1.15	43	6.44	ssw.	8.8	
						750	934.1	11.7	.....	43	5.91	ssw.	10.0	
3:47	1,003.7	17.3	41	ssw.	5.8	916	915.4	10.8	0.54	43	5.57	ssw.	10.8	
						1,000	906.2	11.1	.....	39	5.15	sw.	11.8	
						1,250	879.5	12.2	.....	27	3.84	wsw.	14.6	
3:58	1,003.7	17.6	42	ssw.	6.3	1,386	865.4	12.7	−0.40	21	3.08	w.	16.2	
						1,500	853.8	12.3	.....	20	2.86	w.	15.9	
						1,750	828.7	11.3	.....	16	2.14	w.	15.2	
						2,000	804.4	10.4	.....	13	1.64	w.	14.6	
4:17	1,003.8	17.6	46	ssw.	5.4	2,100	794.7	10.0	0.38	12	1.47	w.	14.3	
						2,250	780.6	9.0	.....	12	1.38	wnw.	14.0	
						2,500	757.0	7.2	.....	13	1.32	nw.	13.0	
						2,750	734.2	5.5	.....	14	1.26	nnw.	13.2	
4:37	1,003.9	17.0	45	ssw.	3.6	2,854	725.1	4.8	0.69	14	1.20	nnw.	13.0	
						3,000	712.1	3.7	.....	15	1.19	nnw.	14.1	
						3,250	690.6	1.8	.....	17	1.18	nnw.	16.1	
4:57	1,004.0	16.3	54	ssw.	3.1	3,263	689.3	1.7	0.70	17	1.17	nnw.	16.2	
						3,250	690.6	1.8	.....	17	1.18	nnw.	16.2	
						3,000	712.1	3.4	.....	18	1.40	nnw.	15.3	
						2,750	733.9	5.0	.....	19	1.66	nnw.	14.4	
5:20	1,004.2	15.5	59	ssw.	1.8	2,630	744.7	5.8	0.64	20	1.84	nnw.	14.0	
						2,500	756.8	6.6	.....	19	1.85	nnw.	13.5	
						2,250	780.6	8.2	.....	18	1.96	nnw.	12.6	
						2,000	804.4	9.9	.....	17	2.07	nnw.	11.8	
						1,750	828.7	11.5	.....	16	2.17	nnw.	10.9	
5:38	1,004.4	14.7	61	ssw.	1.8	1,623	840.9	12.3	−2.76	15	2.15	nnw.	10.4	
						1,500	853.8	8.9	.....	18	2.05	nnw.	12.1	
5:47	1,004.5	14.0	60	ssw.	1.8	1,420	861.9	6.6	0.82	20	1.95	nnw.	13.3	
						1,250	879.5	8.0	.....	23	2.47	nw.	12.5	
						1,000	906.2	10.0	.....	28	3.44	nw.	11.5	
						750	934.1	12.1	.....	32	4.52	wnw.	10.3	
6:04	1,004.7	13.6	59	ssw.	2.2	512	961.5	14.0	−0.19	37	5.91	w.	9.3	
						500	962.7	14.0	.....	38	6.07	w.	9.1	
						250	991.8	13.5	.....	53	8.20	sw.	4.3	
6:14	1,004.7	13.3	59	ssw.	2.2	141	1,004.7	13.3	.....	59	9.01	ssw.	2.2	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 5, 1918, series (No. 1).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:21	1,005.5	7.0	82	sw.	3.1	141	1,005.5	7.0	.....	82	8.22	sw.	3.1	Cloudless.
						250	992.8	9.2	.....	72	8.38	sw.	5.6	
						500	963.1	14.2	.....	49	7.93	wsw.	11.4	
7:26	1,005.5	7.0	79	sw.	3.1	519	960.9	14.6	−2.01	47	7.81	wsw.	11.8	
						750	934.8	13.7	.....	43	6.74	wsw.	11.8	
						1,000	907.7	12.8	.....	39	5.76	sw.	11.8	
						1,250	881.1	11.9	.....	36	5.01	sw.	11.8	
7:49	1,005.6	7.0	80	sw.	2.7	1,351	870.4	11.5	0.37	34	4.61	sw.	11.8	
						1,500	855.4	13.0	.....	25	3.74	sw.	12.0	
8:00	1,005.7	7.2	80	sw.	3.6	1,678	837.2	14.7	−0.96	14	2.34	wsw.	12.3	
						1,750	830.2	14.3	.....	14	2.28	wsw.	12.3	
						2,000	805.9	12.7	.....	13	1.91	wsw.	12.3	
						2,250	782.0	11.2	.....	12	1.60	wsw.	12.2	
						2,500	759.1	9.7	.....	12	1.44	wsw.	12.2	
8:23	1,005.7	8.5	76	sw.	3.1	2,735	738.2	8.2	0.62	11	1.20	wsw.	12.2	
						2,750	737.0	8.1	.....	11	1.19	wsw.	12.1	
						3,000	714.9	7.0	.....	11	1.10	wsw.	11.1	
						3,250	693.8	5.8	.....	11	1.01	wsw.	10.1	
9:08	1,005.8	10.5	72	sw.	3.6	3,435	678.4	5.0	0.46	11	0.96	wsw.	9.4	
						3,500	672.9	4.5	.....	11	0.93	wsw.	9.4	
						3,750	652.4	2.5	.....	11	0.80	wsw.	9.6	
						4,000	632.5	0.5	.....	10	0.63	w.	9.8	
						4,250	613.0	−1.4	.....	10	0.54	w.	10.0	
9:40	1,006.0	12.0	63	sw.	4.9	4,295	609.4	−1.8	0.67	10	0.53	w.	10.0	
						4,250	613.0	−1.6	.....	10	0.54	w.	10.0	
						4,000	632.7	−0.2	.....	10	0.60	w.	9.9	
						3,750	652.4	1.2	.....	10	0.67	w.	9.8	
						3,500	672.9	2.5	.....	10	0.73	w.	9.7	
						3,250	693.8	3.9	.....	10	0.81	w.	9.6	
						3,000	714.9	5.2	.....	10	0.88	w.	9.5	
10:29	1,005.9	14.0	60	sw.	4.9	2,992	715.4	5.3	0.68	10	0.89	w.	9.5	
						2,750	737.0	7.0	.....	10	1.00	w.	9.9	
						2,500	759.1	8.7	.....	9	1.01	w.	10.3	
						2,250	782.0	10.4	.....	9	1.13	wsw.	10.6	
						2,000	805.9	12.1	.....	9	1.27	wsw.	11.0	
						1,750	830.6	13.8	.....	8	1.26	wsw.	11.4	
11:12	1,005.6	15.5	49	sw.	7.2	1,548	851.1	15.2	−0.36	8	1.38	wsw.	11.7	
						1,500	858.8	15.0	.....	8	1.36	wsw.	11.6	
						1,250	881.1	14.1	.....	10	1.61	sw.	11.0	
11:32	1,005.5	16.0	52	sw.	7.2	1,020	906.0	13.3	0.39	11	1.68	sw.	10.5	
						1,000	907.7	13.4	.....	11	1.69	sw.	10.5	
						750	934.8	14.4	.....	14	2.30	sw.	10.1	
11:41	1,005.5	16.0	54	sw.	8.0	539	959.1	15.2	−0.80	17	2.94	sw.	9.8	
						500	963.1	14.9	.....	19	3.22	sw.	9.6	
11:44	1,005.5	16.0	54	sw.	7.6	377	977.8	13.9	0.89	26	4.13	sw.	8.9	
						250	992.8	15.0	.....	41	6.99	sw.	9.4	
11:46	1,005.5	16.0	54	sw.	9.8	141	1,005.5	16.0	.....	54	9.82	sw.	9.8	Cloudless.

December 5, 1918, series (No. 2).

P. M.														
12:43	1,004.9	17.4	47	ssw.	8.5	141	1,004.9	17.4	.....	47	9.34	ssw.	8.5	Cloudless.
						250	992.0	16.3	.....	.....	.....	ssw.	8.2	
						500	963.0	13.9	.....	.....	.....	ssw.	7.6	
1:28	1,004.6	19.0	49	ssw.	8.0	531	959.5	13.6	0.98	.....	.....	ssw.	7.5	
						750	934.4	13.7	.....	.....	.....	ssw.	8.6	
						1,000	907.0	13.9	.....	.....	.....	ssw.	9.8	
						1,250	880.6	14.0	.....	.....	.....	sw.	11.0	
						1,500	855.0	14.2	.....	.....	.....	sw.	12.2	
1:57	1,004.4	18.9	44	ssw.	8.5	1,539	851.1	14.2	−0.06	.....	.....	sw.	12.4	
						1,750	830.0	12.9	.....	.....	.....	sw.	12.7	
						2,000	805.7	11.5	.....	.....	.....	sw.	13.0	
						2,250	781.9	10.0	.....	.....	.....	wsw.	13.3	
						2,500	758.6	8.6	.....	.....	.....	wsw.	13.6	
						2,750	736.2	7.1	.....	.....	.....	wsw.	13.9	
2:25	1,004.4	19.3	44	ssw.	8.9	2,857	726.5	6.5	0.58	.....	.....	wsw.	14.0	
						3,000	714.1	6.1	.....	.....	.....	wsw.	12.3	
2:55	1,004.0	19.8	42	ssw.	8.5	3,194	697.2	5.6	0.43	.....	.....	wsw.	9.9	
						3,000	714.1	6.7	.....	.....	.....	wsw.	10.4	
						2,750	736.2	8.2	.....	.....	.....	wsw.	11.0	
						2,500	758.6	9.7	.....	.....	.....	wsw.	11.6	
3:30	1,003.8	20.0	40	ssw.	6.3	2,278	779.4	11.0	0.46	.....	.....	wsw.	12.2	
						2,250	781.9	11.1	.....	.....	.....	wsw.	12.1	
						2,000	805.7	12.3	.....	.....	.....	wsw.	11.5	
						1,750	830.0	13.4	.....	.....	.....	wsw.	10.9	
3:49	1,003.8	20.0	42	ssw.	6.7	1,626	842.4	14.0	0.34	.....	.....	wsw.	10.6	
						1,500	855.0	14.4	.....	.....	.....	wsw.	10.9	
						1,250	880.6	15.3	.....	.....	.....	sw.	11.6	
4:04	1,003.7	19.7	50	sw.	5.8	1,128	893.6	15.7	−0.93	.....	.....	sw.	11.9	
						1,000	907.0	14.5	.....	.....	.....	ssw.	12.2	
4:06	1,003.7	19.6	51	sw.	5.8	892	918.9	13.5	0.77	.....	.....	ssw.	12.4	
						750	934.4	14.6	.....	.....	.....	ssw.	11.1	
						500	962.3	16.5	.....	.....	.....	sw.	8.8	
						250	991.0	18.5	.....	.....	.....	sw.	6.4	
4:18	1,003.7	19.3	51	sw.	5.4	141	1,003.7	19.3	.....	51	11.42	sw.	5.4	Cloudless.

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 5, 1918, series (No. 3).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
5:00	1,003.7	18.6	43	SSW.	5.4	141	1,003.7	18.6	.....	43	9.21	SSW.	5.4	Cloudless.
						250	991.1	17.6	.....	46	9.26	SSW.	6.6	
						500	962.4	15.4	.....	54	9.45	S.	9.2	
5:12	1,003.7	17.6	47	SSW.	5.4	530	958.7	15.1	0.90	55	9.44	S.	9.5	
						750	934.2	13.9	.....	51	8.10	SSW.	10.8	
						1,000	906.9	12.4	.....	46	6.62	SW.	12.3	Few A.St. on n. horizon
5:24	1,003.7	17.1	48	SSW.	5.4	1,026	904.0	12.3	0.56	46	6.58	SW.	12.4	
5:26	1,003.7	17.0	49	SSW.	5.4	1,228	882.6	14.2	−0.94	35	5.67	SW.	14.3	
						1,250	880.4	14.2	.....	34	5.50	SW.	14.2	
						1,500	854.5	13.7	.....	28	4.39	SW.	13.2	
						1,750	829.3	13.2	.....	22	3.34	WSW.	12.1	
						2,000	805.5	12.7	.....	16	2.35	WSW.	11.1	
5:48	1,003.7	16.0	54	S.	4.0	2,073	798.1	12.6	0.19	14	2.04	WSW.	11.8	
						2,250	782.0	11.3	.....	13	1.74	WSW.	10.1	
						2,500	758.9	9.5	.....	12	1.42	WSW.	9.2	
						2,750	736.3	7.7	.....	10	1.05	WSW.	8.2	
6:34	1,003.7	14.4	59	S.	4.5	2,964	717.2	6.1	0.81	9	0.85	WSW.	7.4	
						2,750	736.3	8.0	.....	9	0.97	WSW.	7.8	
6:56	1,003.7	14.1	57	S.	5.8	2,563	753.1	9.7	0.60	9	1.08	WSW.	8.1	
						2,500	758.9	10.1	.....	9	1.11	WSW.	8.2	
						2,250	782.0	11.6	.....	9	1.23	WSW.	8.7	
7:24	1,003.8	14.0	58	S.	4.9	2,059	799.8	12.9	0.35	9	1.34	WSW.	9.0	
						2,000	805.5	13.1	.....	9	1.36	WSW.	9.3	
						1,750	829.3	14.0	.....	9	1.44	WSW.	10.5	
						1,500	854.5	14.9	.....	9	1.52	SW.	11.7	
7:45	1,003.9	13.5	61	S.	5.8	1,261	879.1	15.7	−1.00	9	1.61	SW.	12.9	
						1,250	880.4	15.6	.....	9	1.59	SW.	12.9	
						1,000	906.9	13.1	.....	15	2.26	SW.	12.0	
7:56	1,004.0	13.2	61	S.	5.4	942	913.0	12.5	0.54	16	2.32	SW.	11.4	
						750	934.2	13.5	.....	22	3.40	SSW.	12.1	
						500	962.4	14.9	.....	30	5.08	SSW.	13.0	
8:07	1,004.0	13.3	61	S.	5.4	334	981.2	15.8	−1.35	35	6.28	S.	13.6	
						250	991.1	14.7	.....	46	7.70	S.	10.2	
8:11	1,004.1	13.2	61	SSW.	5.8	141	1,004.1	13.2	.....	61	9.25	SSW.	5.8	Cloudless.

December 5 and 6, 1918, series (No. 4).

P. M.														
10:50	1,004.6	13.0	64	SW.	6.7	141	1,004.6	13.0	.....	64	9.59	SW.	6.7	Cloudless.
						250	991.3	13.8	.....	63	9.94	SW.	8.5	
10:57	1,004.7	13.2	60	SW.	8.0	421	971.9	15.0	−0.72	61	10.40	WSW.	11.4	
						500	962.3	14.5	.....	59	9.74	WSW.	12.5	
						750	934.6	12.9	.....	53	7.89	WSW.	15.9	
11:10	1,004.7	13.1	61	SSW.	9.4	884	919.9	12.0	0.65	56	7.02	WSW.	17.7	
						1,000	907.5	13.5	.....	39	6.03	WSW.	17.4	
11:20	1,004.7	13.1	61	SSW.	8.0	1,222	883.7	16.4	−1.30	17	3.17	WSW.	16.7	
						1,250	881.0	16.3	.....	17	3.15	WSW.	16.4	
						1,500	855.5	15.5	.....	15	2.64	WSW.	14.0	
						1,750	830.9	14.6	.....	13	2.16	WSW.	11.7	
11:34	1,004.7	13.0	64	SSW.	8.0	1,851	820.6	14.3	0.33	12	1.96	WSW.	10.7	
						2,000	806.0	12.9	.....	11	1.64	WSW.	10.7	
						2,270	782.2	10.7	.....	10	1.29	WSW.	10.7	
11:54	1,004.7	13.0	64	SSW.	8.5	2,402	768.2	9.3	0.91	9	1.05	WSW.	10.7	
						2,500	759.5	8.7	.....	9	1.01	WSW.	10.6	
						2,750	737.5	7.2	.....	8	0.81	WSW.	10.2	
A. M.														
12:20	1,004.6	12.4	68	SSW.	6.7	3,002	713.9	5.7	0.67	7	0.64	WSW.	9.8	
						2,750	737.5	7.6	.....	7	0.73	WSW.	9.7	
						2,500	759.5	9.5	.....	7	0.83	WSW.	9.6	
						2,270	782.2	11.3	.....	7	0.94	WSW.	9.5	
						2,000	805.3	13.2	.....	7	1.06	WSW.	9.3	
12:36	1,004.4	11.6	73	SSW.	5.4	1,892	815.5	14.0	0.31	7	1.12	WSW.	9.3	
						1,750	829.7	14.4	.....	7	1.15	WSW.	10.3	
						1,500	854.5	15.2	.....	7	1.21	WSW.	12.0	
						1,250	880.0	16.0	.....	7	1.27	WSW.	13.7	
1:18	1,004.4	11.0	78	SSW.	4.9	1,177	887.3	16.2	1.88	7	1.29	WSW.	14.2	
						1,000	906.4	12.9	.....	11	1.64	WSW.	14.7	
1:22	1,004.4	11.0	78	SSW.	4.9	890	918.0	10.8	−0.08	13	1.68	WSW.	15.0	
						750	933.7	10.7	.....	25	3.22	WSW.	12.9	
						500	961.9	10.5	.....	47	5.97	SW.	9.3	
						250	991.4	10.3	.....	69	8.65	SSW.	5.6	
1:39	1,004.4	10.2	79	SSW.	4.0	141	1,004.4	10.2	.....	79	9.84	SSW.	4.0	Cloudless.

December 6, 1918, series (No. 5).

A. M.														
2:50	1,004.4	9.2	86	SSW.	3.6	141	1,004.4	9.2	.....	86	10.01	SSW.	3.6	Cloudless.
						250	991.2	10.2	.....	86	10.71	SW.	9.1	
3:00	1,004.4	9.9	87	SSW.	3.1	465	996.0	12.1	−0.90	87	12.28	WSW.	19.9	
						500	961.9	12.0	.....	86	12.07	WSW.	19.8	
						750	933.7	10.9	.....	79	10.30	WSW.	18.9	
3:14	1,004.4	9.0	88	SSW.	3.1	960	910.5	10.0	0.42	73	8.96	WSW.	18.1	
						1,000	906.2	10.6	.....	66	8.43	WSW.	17.4	
						1,250	880.0	14.6	.....	24	3.99	WSW.	12.8	
3:24	1,004.4	9.0	88	SSW.	3.1	1,263	878.1	14.8	−1.58	22	3.70	WSW.	12.6	
						1,500	854.0	13.6	.....	19	2.96	WSW.	12.1	
						1,750	828.7	12.2	.....	16	2.27	WSW.	11.5	
						2,000	804.4	10.9	.....	13	1.70	WSW.	11.0	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 6, 1918, series (No. 5)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{dt}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
3:57	1,004.4	9.0	88	ssw.	2.7	2,083	796.4	10.5	0.52	12	1.52	wsw.	10.8	
						2,250	780.7	9.3		12	1.41	wsw.	10.2	
						2,500	757.3	7.5		12	1.24	wsw.	9.3	
						2,750	734.4	5.7		12	1.10	wsw.	8.4	
4:47	1,004.1	8.5	93	ssw.	3.6	2,768	732.9	5.6	0.83	12	1.09	wsw.	8.3	
						2,750	734.4	5.8		12	1.11	wsw.	8.3	
						2,500	757.3	8.1		12	1.30	wsw.	8.5	
5:03	1,004.0	8.6	94	ssw.	3.6	2,255	779.5	10.4	0.49	12	1.51	wsw.	8.7	
						2,000	804.4	11.7		12	1.65	wsw.	8.8	
						1,750	828.7	12.9		12	1.79	wsw.	8.8	
						1,500	853.5	14.1		12	1.93	wsw.	8.9	
5:28	1,004.0	8.8	93	ssw.	3.1	1,360	867.4	14.8	−1.52	12	2.02	wsw.	8.9	
						1,250	879.5	13.1		12	1.81	wsw.	10.4	
5:39	1,004.0	9.0	93	ssw.	3.1	1,037	901.4	9.9	0.14	12	1.46	wsw.	13.3	
						1,000	905.8	10.0		17	2.09	wsw.	13.5	
						750	933.7	10.3		48	6.01	wsw.	14.5	
						500	961.9	10.7		79	10.17	wsw.	15.5	
5:54	1,004.0	8.7	94	ssw.	3.1	412	971.7	10.8	−0.78	90	11.66	wsw.	15.9	
						250	991.2	9.5		92	10.92	sw.	8.3	
5:59	1,004.0	8.7	94	ssw.	3.1	141	1,004.0	8.7		94	10.58	ssw.	3.1	Cloudless.

December 6, 1918, series (No. 6).

A. M.														
7:44	1,004.9	8.4	95	ssw.	4.0	141	1,004.9	8.4		95	10.47	ssw.	4.0	A few A.St., sw.
						250	991.8	8.4		92	10.14	ssw.		
						500	962.2	8.2		84	9.13	ssw.		
						750	934.0	8.1		76	8.21	ssw.		
						1,000	907.0	8.0		68	7.30	sw.		
						1,250	881.0	7.9		61	6.50	sw.		
						1,500	855.0	7.8		53	5.61	sw.		
						1,750	829.5	7.7		45	4.73	sw.		
						2,000	804.8	7.6		37	3.86	sw.		
						2,250	781.2	7.5		29	3.01	wsw.		
						2,500	757.9	7.4		22	2.27	wsw.		
						2,750	734.9	7.3		14	1.43	wsw.		
9:08	1,005.8	12.1	89	ssw.	6.7	2,879	723.4	7.2	0.04	10	1.02	wsw.		
						3,000	713.2	6.5		10	0.97	wsw.		
9:20	1,005.9	12.8	88	ssw.	4.9	3,172	699.1	5.6	0.54	10	0.91	sw.		
						3,000	714.7	6.5		10	0.97	sw.		
9:43	1,006.2	13.8	84	sw.	6.3	2,763	736.4	7.8	0.70	10	1.06	sw.		
						2,750	737.5	7.9		10	1.06	sw.		
						2,500	760.4	9.6		10	1.20	sw.		
						2,250	783.6	11.4		10	1.35	sw.		
						2,000	807.4	13.1		10	1.51	sw.		
9:57	1,006.4	14.4	83	ssw.	6.3	1,989	809.2	13.2	0.12	10	1.52	sw.		
						1,750	832.2	13.5		19	2.94	sw.		
						1,500	857.3	13.8		29	4.58	sw.		
						1,250	881.6	14.1		38	6.11	sw.		
						1,000	910.2	14.4		48	7.87	sw.		
						750	937.7	14.6		57	9.47	sw.		
						500	965.4	15.0		66	11.25	sw.		
						250	994.4	15.2		76	13.13	sw.		
10:46	1,006.2	15.4	80	sw.	8.5	141	1,006.2	15.4		80	14.00	sw.	8.5	Few Cu. on se. horizon.

December 6, 1918, series (No. 7).

A. M.														
11:52	1,005.5	17.1	78	ssw.	9.8	141	1,005.5	17.1		78	15.21	ssw.	9.8	Few A.St. on ne. horizon; few Cu. on S. and se. horizon.
						250	992.7	15.9		79	14.28	ssw.	10.3	
						500	963.7	13.2		80	12.14	sw.	11.3	
P. M.														
12:02	1,005.4	17.7	76	sw.	9.8	513	932.1	13.1	1.08	80	12.06	sw.	11.4	
						750	905.7	13.7		68	10.66	sw.	11.0	
						1,000	908.5	14.4		56	9.18	wsw.	10.5	
12:23	1,005.1	17.5	74	sw.	9.8	1,195	887.5	14.9	−0.26	46	7.79	wsw.	10.2	
						1,250	881.9	14.7		45	7.53	wsw.	10.1	Few Cu., s.
						1,500	855.0	13.6		39	6.08	wsw.	9.7	
						1,750	830.0	12.6		34	4.96	sw.	9.3	
						2,000	805.9	11.5		28	3.80	sw.	8.9	
						2,250	782.4	10.5		22	2.79	sw.	8.5	
1:00	1,004.7	18.8	71	sw.	8.5	2,267	780.9	10.4	0.42	22	2.77	sw.	8.5	
						2,500	759.0	9.1		21	2.43	sw.	8.6	
						2,750	736.2	7.8		20	2.12	sw.	8.7	
						3,000	714.4	6.4		19	1.83	sw.	8.7	
						3,250	693.7	5.0		18	1.57	sw.	8.8	
						3,500	673.0	3.6		17	1.34	sw.	8.9	
						3,750	652.4	2.3		16	1.15	sw.	9.0	
1:48	1,004.1	20.6	65	ssw.	8.5	3,874	641.8	1.6	0.56	16	1.10	sw.	9.0	
						3,750	652.4	2.3		16	1.15	sw.	9.7	
						3,500	673.0	3.7		15	1.19	sw.	11.2	
						3,250	693.7	5.2		14	1.24	wsw.	12.7	
						3,000	714.4	6.6		14	1.36	wsw.	14.1	
2:31	1,003.8	21.0	60	ssw.	8.5	2,804	731.4	7.7	0.45	13	1.37	wsw.	15.3	
						2,750	736.2	7.9		13	1.38	wsw.	15.2	
						2,500	759.0	9.1		14	1.62	wsw.	14.8	
						2,250	782.4	10.2		14	1.74	wsw.	14.4	
						2,000	805.9	11.3		15	2.01	sw.	14.0	
						1,750	830.0	12.5		15	2.17	sw.	13.5	
						1,500	855.0	13.6		16	2.49	sw.	13.1	

TABLE 17.—*Free air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 6, 1918, series (No. 7)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{10m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.		Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
3:09	1,003.7	21.5	57	ssw.	9.8	1,477	857.6	13.7	−0.68	16	2.51	sw.	13.1	
						1,250	880.8	12.2		24	3.41	ssw.	8.3	
3:14	1,003.6	21.4	55	ssw.	8.0	1,219	884.0	11.9	0.77	25	3.48	ssw.	7.7	
						1,000	907.1	13.6		39	6.08	ssw.	7.5	
						750	934.4	15.5		56	9.86	ssw.	7.3	
3:28	10,03.6	21.4	57	ssw.	7.2	572	954.6	16.9	1.04	68	13.09	ssw.	7.2	
						500	952.4	17.7		66	13.36	ssw.	7.0	
						250	990.8	20.3		60	14.29	ssw.	6.5	
3:34	1,003.5	21.4	57	ssw.	6.3	141	1,003.5	21.4		57	14.53	ssw.	6.3	Few Cu., s.
December 7, 1918.														
A. M.														
7:07	1,002.4	14.8	95	sw.	5.8	141	1,002.4	14.8		95	15.99	sw.	5.8	10/10 St.
						250	990.0	14.6		94	15.62	sw.	9.4	Altitude of St. base about 300 m.
						500	961.0	14.1		90	14.48	ssw.	17.8	
7:36	1,002.4	15.0	95	ssw.	7.2	729	935.1	13.6	0.20	87	13.55	s.	25.4	
						750	932.7	13.6		87	13.55	s.	25.2	
						1,000	905.7	13.4		87	13.37	ssw.	22.7	
						1,250	879.5	13.3		88	13.44	sw.	20.2	
8:18	1,002.5	15.4	95	ssw.	7.2	1,376	866.5	13.2	0.00	88	13.35	sw.	19.0	
						1,500	854.0			77		sw.	17.1	
						1,750	829.2			55		sw.	13.4	
						2,000	804.7			33		sw.	9.7	
8:56	1,002.7	16.1	92	ssw.	7.2	2,077	797.3			26	3.77	sw.	8.5	Altitude of St. base about 350 m.
						2,250	781.1			40		sw.	8.4	
9:38	1,002.9	16.7	92	s.	6.3	2,401	767.0			70	9.13	sw.	8.4	10/10 St., sw.
						2,250	781.1			62		sw.	9.1	
						2,000	804.7			49		sw.	10.3	
						1,750	829.6			37		sw.	11.5	
10:29	1,003.0	18.1	87	ssw.	8.0	1,691	814.9	12.1	0.07	34	4.80	sw.	11.8	
						1,500	835.0	12.2		49	6.96	sw.	13.2	
						1,250	860.9	12.4		69	9.94	sw.	15.0	
						1,000	907.2	12.6		89	12.99	sw.	16.8	
10:39	1,003.0	18.3	86	ssw.	8.0	991	907.6	12.6	0.67	90	13.13	sw.	16.9	
						750	934.2	14.2		89	14.41	ssw.	14.8	Altitude of St. base about 650 m.
						500	962.0	15.9		89	16.08	ssw.	12.6	
						250	990.4	17.6		88	17.71	ssw.	10.4	
11:13	1,003.1	18.3	88	ssw.	9.4	141	1,003.1	18.3		88	18.51	ssw.	9.4	10/10 St., ssw.
December 8, 1918.														
A. M.														
7:08	999.6	18.4	94	s.	6.3	141	999.6	18.4		94	19.89	s.	6.3	5/10 St.Cu., sw.; 5/10 St., s.
						250	987.0	17.8		93	19.36	s.	9.7	
						500	958.7	16.3		96	17.79	ssw.	17.4	Altitude of St. base about 500 m.
7:19	999.6	18.6	93	s.	6.3	544	953.8	16.0	0.60	96	17.45	ssw.	18.8	
						750	930.4	14.7		95	15.89	ssw.	20.6	
						1,000	903.3	13.0		94	14.08	ssw.	22.8	
7:27	999.6	18.7	94	ssw.	6.3	1,049	898.5	12.7	0.65	94	13.81	ssw.	23.2	
						1,250	877.0	14.3		80	13.04	sw.	20.3	
7:41	999.6	18.8	93	ssw.	6.7	1,445	857.4	15.8	−0.78	66	11.85	sw.	17.6	Altitude of St. base about 400 m.
						1,500	851.6	15.5		65	11.45	sw.	16.8	2/10 St.Cu., sw.
						1,750	826.9	13.9		61	9.69	sw.	13.0	8/10 St., s.
						2,000	802.6	12.4		60	8.64	sw.	9.2	
8:37	999.4	19.2	91	s.	9.8	2,138	789.9	11.5	0.70	58	7.87	sw.	7.1	6/10 St.Cu., sw.; 4/10 St., s.
						2,000	802.6	12.6		58	8.46	sw.	9.2	
						1,750	826.9	14.5		57	9.41	ssw.	13.1	
9:22	999.4	20.2	86	ssw.	9.8	1,570	845.0	15.9	−4.56	56	10.12	ssw.	15.9	
9:33	999.5	20.3	86	ssw.	9.8	1,502	852.1	12.8	0.50	88	13.01	ssw.	21.2	
						1,250	878.0	14.1		90	14.48	ssw.	21.2	
						1,000	904.3	15.3		93	16.16	ssw.	21.2	
9:55	999.6	20.6	85	ssw.	8.5	885	916.7	15.9	0.02	94	16.99	ssw.	21.2	
						750	931.3	16.7		92	17.49	ssw.	18.8	
						500	958.7	18.2		89	18.60	ssw.	14.4	
						250	987.0	19.8		86	19.87	ssw.	10.0	
10:06	999.6	20.5	85	ssw.	8.0	141	999.6	20.5		85	20.50	ssw.	8.0	9/10 St.Cu., sw.; few St., s.
December 9, 1918.														
A. M.														
8:04	996.3	18.8	94	ssw.	5.8	141	996.3	18.8		94	20.40	ssw.	5.8	10/10 A.St., w.
						250	983.8	18.4		93	19.68	ssw.	8.5	
						500	955.1	17.5		90	18.00	wsw.	14.8	
8:09	996.3	18.8	94	ssw.	5.8	540	950.9	17.4	0.35	90	17.88	wsw.	15.8	Few Cl., w.; few A.St., sw.; 3/10 St.Cu., s.
						750	927.6	17.0		87	16.86	wsw.	13.6	few St., s.
8:33	996.5	19.4	93	ssw.	7.2	989	902.7	16.5	0.20	83	15.58	sw.	11.1	Altitude of St. base about 850 m.
						1,000	901.0	16.5		83	15.58	sw.	11.1	
						1,250	875.0	15.4		82	14.35	sw.	10.5	Few Cl., w.; 2/10 St.Cu., s.
						1,500	850.0	14.3		80	13.04	sw.	10.1	
						1,750	825.4	13.2		79	11.98	ssw.	9.6	Altitude of St. base about 550 m.
						2,000	801.3	12.1		77	10.87	ssw.	9.1	1/10 A.St., w.; 4/10 St.Cu., s.
10:15	996.8	20.9	86	sw.	10.3	2,084	793.4	11.7	0.42	77	10.59	ssw.	8.9	
						2,000	801.3	12.0		75	10.52	ssw.	8.9	
						1,750	825.4	13.1		70	10.56	ssw.	8.9	10/10 St.Cu., s.
10:30	996.7	20.8	86	sw.	11.2	1,528	847.2	14.0	0.14	65	10.39	ssw.	8.9	
						1,500	850.0	14.0		66	10.55	ssw.	8.9	
						1,250	875.0	14.4		78	12.79	ssw.	9.3	
						1,000	901.0	14.8		91	15.32	s.	9.7	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 9, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:39	996.0	22.5	80	sw.	9.4	951	906.4	14.8	0.74	92	15.48	s.	9.7	
						750	927.4	16.3		90	16.68	ssw.	9.0	
						500	954.8	18.1		88	18.28	sw.	8.2	
P. M.														
12:37	995.0	22.6	79	sw.	6.7	397	966.0	18.9	1.45	87	19.00	sw.	7.8	
						250	982.5	21.0		82	20.39	sw.	7.2	
12:41	994.9	22.6	79	sw.	6.7	141	994.9	22.6		79	21.67	sw.	6.7	9/10 St.Cu., s.

December 10, 1918.

A. M.														
7:20	998.0	15.5	95	w.	4.9	141	998.0	15.5		95	16.73	w.	4.9	10/10 St., w.
						250	985.1	14.9		92	15.58	wnw.	7.1	Altitude of St. base about 300 m.
7:31	998.1	15.3	96	w.	5.4	366	971.9	14.3	0.53	89	14.51	nw.	9.4	
						500	956.8	16.2		65	11.97	nw.	8.9	
7:36	998.1	15.2	96	w.	4.5	530	953.2	16.6	−1.40	60	11.33	nw.	8.8	
						750	929.0	15.9		47	8.49	nw.	8.0	
						1,000	902.0	15.2		32	5.53	nnw.	7.0	5/10 A.St., w.; 4/10 St., wnw.
8:27	998.4	15.5	94	wnw.	3.1	1,104	891.2	14.9	0.20	26	4.40	nnw.	6.6	
						1,000	902.3	15.0		27	4.60	nnw.	6.4	6/10 A.St., w.; few St., wnw.
						750	930.2	15.3		30	5.21	nnw.	6.0	
						500	958.2	15.5		32	5.64	nnw.	5.5	
10:42	999.1	18.9	42	nnw.	6.7	442	964.4	15.6	1.21	33	5.85	nnw.	5.4	
						250	986.7	17.8		39	7.95	nnw.	6.2	
10:54	999.0	19.0	42	nnw.	6.7	141	999.0	19.0		42	9.23	nnw.	6.7	2/10 A.St., w.

December 11, 1918.

A. M.														
7:28	1,005.2	9.3	82	nne.	6.7	141	1,005.2	9.3		82	9.61	nne.	6.7	8/10 A.St., wsw.
7:31	1,005.2	9.3	80	nne.	6.3	237	993.6	8.9	0.42	76	8.66	ne.	9.6	
						250	992.5	9.0		75	8.61	nne.	9.7	
7:33	1,005.3	9.3	78	nne.	6.3	460	967	11.1	0.99	63	8.32	ene.	11.8	
						500	962 7	11.1		61	8.06	ene.	11.6	9/10 A.St., wsw.
						750	934.5	10.8		50	6.48	ne.	10.0	1/10 St.Cu., wsw.
7:50	1,005.5	9.4	76	nne.	6.7	985	908.6	10.6	0.10	39	4.98	ne.	8.6	
						1,000	907 0	10.6		38	4.86	ne.	8.5	
						1,250	880.2	10.3		28	3.51	ene.	6.2	Rain from 8:25 to 8:38 a. m.
						1,500	854.1	10.0		18	2.21	e.	4.0	
9:27	1,005.7	10.1	75	nne.	5.8	1,606	843.3	9.9	0.16	14	1.71	ese.	3.0	
						1,500	854 1	10.1		15	1.85	e.	3.7	
						1,250	880.2	10.6		18	2.30	ene.	5.5	
10:12	1,005.6	10.6	74	ene.	6.7	1,051	901.4	11.0	−0.11	20	2.63	ne.	6.9	
						1,000	907.0	10.9		22	2.87	ne.	7.3	
						750	934.5	10.7		34	4.38	ne.	9.3	
10:23	1,005.6	10.6	74	ne.	5.8	593	932.4	10.5	−1.40	42	5.33	ne.	10.6	
						500	962.7	9.1		57	6.59	ne.	10.6	
10:28	1,005.5	10.6	74	ne.	5.8	479	965.4	8.8	0.50	60	6.80	ne.	10.6	
						250	992.0	10.0		68	8.35	nne.	7.4	
10:33	1,005.5	10.5	72	nne.	5.8	141	1,005.5	10.5		72	9.14	nne.	5.8	8/10 A.St., wsw.; 2/10 St.Cu., wsw.

December 12, 1918 (No. 1).

P. M.														
1:59	992 6	21.4	95	ssw.	7.6	141	992.6	21.4		85	24.22	ssw.	7.6	10/10 St., s.; light rain ended at 1:42 p. m.
						250	980.0	21.5		95	24.37	sw.	8.3	1/10 A.St., w.; 9/10 St., s.
2:20	992.5	21.8	92	ssw.	8.9	480	954.6	21.6	−0.06	96	24.77	wsw.	9.7	Altitude of St.Cu. base about 500 m.
						500	952.1	21.3		96	24.32	wsw.	9.5	Rain from 2:29 p. m. to 2:50 p. m.
						750	925.0	17.5		99	19.80	wsw.	7.1	
2:36	992.4	21.7	92	ssw.	8.9	837	915.7	16.2	1.18	100	18.42	wsw.	6.2	7/10 A.St., w.; 3/10 St., s.
						750	925.0	17.0		98	18.99	wsw.	6.7	
						500	952.1	19.1		93	20.56	sw.	8.2	Rain from 3:05 to 3:06 p. m.
						250	980.0	21.2		88	22.16	ssw.	9.7	
3:00	992.3	22.2	86	ssw.	10.4	141	992.3	22.2		86	23.02	ssw.	10.4	8/10 A.St., w.; 2/10 St., s.

December 12, 1918 (No. 2).

P. M.														
4:16	992.3	22.2	87	ssw.	7.6	141	992.3	22.2		87	23.29	ssw.	7.6	4/10 A.St., sw.; 6/10 St., sw.
						250	980.4	21.5		87	23.32	ssw.	10.8	
						500	952.0	19.9		92	21.38	ssw.	18.2	
4:23	992.3	22.2	87	ssw.	7.2	522	949.6	19.7	0.66	92	21.11	ssw.	18.9	
						750	924.3	18.1		92	19.11	ssw.	19.3	
						1,000	897.6	16.3		92	17.05	ssw.	19.8	
						1,250	872.0	14 6		92	15.29	ssw.	20.3	
						1,500	847.0	12.8		92	13.60	ssw.	20.8	
4:43	992.4	22.0	88	ssw.	5.8	1,668	830.3	11.6	0.64	92	12.57	ssw.	21.1	
						1,500	847.0	12.6		92	13.42	ssw.	19.7	
						1,250	872.0	14.0		92	13.78	ssw.	17.1	
						1,000	897.6	15.4		92	16.10	s.	15.5	
						750	924.3	17.8		92	18.75	s.	14.1	
5:26	992.7	19.0	95	nw.	2.7	523	949.6	18.1	0.16	92	19.11	s.	12.4	
						500	952.0	18.2		92	19.23	ssw.	11.8	
						250	980.4	18.5		93	19.81	w.	5.5	
5:35	992.7	18.7	94	nw.	2.7	141	992.7	18.7		94	20.28	nw.	2.7	10/10 St., wsw.

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 13, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:09	994.8	13.0	97	ssw.	4.9	141	994.8	13.0		97	14.53	ssw.	4.9	9/10 A.St., sw.; 1/10 St. Cu., sw.
						250	982.0	12.7		96	14.10	ssw.	5.9	Altitude at St.Cu. base about 350 m.
						500	953.7	12.0		94	13.19	ssw.	8.1	
8:25	995.0	13.0	93	ssw.	4.5	540	948.7	11.9	0.28	94	13.09	ssw.	8.4	
						750	925.7	10.5		95	12.06	sw.	8.1	
						1,000	898.0	8.8		97	10.99	sw.	7.8	
						1,250	871.4	7.1		99	9.99	wsw.	7.5	4/10 A.St., sw.; 2/10 A.Cu., sw.; 3/10 St.Cu., sw.
8:54	995.5	13.0	96	ssw.	4.0	1,311	865.1	6.7	0.67	99	9.71	wsw.	7.4	3/10 A.St., sw.; 4/10 A.Cu., sw.; 2/10 St.Cu., sw.
						1,500	845.5	6.1		90	8.48	wsw.	8.1	
						1,750	820.3	5.4		77	6.91	w.	9.0	
						2,000	795.4	4.7		65	5.55	w.	9.9	8/10 A.St., sw.; few A.Cu.; 1/10 St., s.
9:55	995.2	13.7	93	sw.	6.3	2,171	778.9	4.2	0.29	56	4.62	w.	10.5	
						2,250	771.0	4.3		52	4.32	w.	11.3	
						2,500	747.7	4.6		41	3.48	w.	13.7	
						2,750	725.0	4.9		30	2.60	w.	16.2	
10:03	995.2	13.9	91	sw.	5.8	2,889	712.7	5.1	−0.84	24	2.11	w.	17.6	
						2,750	725.0	2.9		21	1.88	w.	16.6	
10:09	995.2	13.9	90	sw.	8.9	2,684	730.6	1.9	0.36	19	1.33	w.	16.1	4/10 A.Cu., sw.; 4/10 A.St., sw.; few Ci.Cu., sw.
						2,500	747.7	2.6		22	1.62	w.	15.1	
						2,250	771.0	3.5		26	2.04	w.	13.7	
						2,000	795.0	4.4		30	2.51	wsw.	12.3	1/10 A.St., sw.; 2/10 A.Cu., sw.; 1/10 Cu., ssw.; few St.Cu., ssw.
						1,750	819.7	5.3		34	3.03	wsw.	10.9	Altitude of St.Cu. base about 450 m.
						1,500	845.0	6.2		58	3.80	wsw.	9.4	
10:54	995.2	14.7	83	sw.	9.4	1,476	847.5	6.3	0.41	38	3.63	wsw.	9.3	
						1,250	871.2	7.2		46	4.67	wsw.	9.3	Altitude of Cu. base about 700 m.
						1,000	898.0	8.2		55	5.98	wsw.	9.3	
						750	935.7	9.3		64	7.50	wsw.	9.3	Few A.St., sw.
11:18	995.3	15.0	76	wsw.	8.9	543	948.7	10.1	1.29	72	8.90	wsw.	9.3	4/10 Cu., sw.
						500	953.7	10.7		72	9.27	wsw.	9.3	
						250	982.3	13.9		75	11.91	wsw.	9.0	
11:23	995.4	15.3	76	wsw.	8.9	141	995.4	15.3		76	13.21	wsw.	8.9	Few A.St., sw.; 5/10 Cu., ssw.

December 14, 1918.

A. M.														
7:15	1,005.2	4.3	81	wnw.	4.0	141	1,005.2	4.3		81	6.73	wnw.	4.0	Cloudless.
						250	992.2	5.4		75	6.73	wnw.	6.5	
7:18	1,005.2	4.3	81	wnw.	4.0	450	968.0	7.5	−1.04	63	6.53	nw.	11.1	
						500	962.4	7.3		61	6.24	nw.	11.4	
						750	933.3	6.0		52	4.86	nw.	13.1	
						1,000	905.0	4.8		43	3.70	nnw.	14.8	
7:43	1,005.3	4.8	79	wnw.	2.7	1,229	880.1	3.7	0.49	35	2.79	nnw.	16.4	
						1,250	877.7	3.6		35	2.77	nnw.	16.4	
						1,500	851.0	2.9		29	2.18	nnw.	16.6	
						1,750	825.5	2.2		24	1.72	nnw.	16.7	
						2,000	800.9	1.4		19	1.28	nnw.	16.9	
8:31	1,006.1	6.6	66	wnw.	3.6	2,075	793.3	1.2	0.24	17	1.13	nnw.	16.9	
						2,000	800.9	1.3		17	1.14	nnw.	16.9	
						1,750	826.0	1.8		17	1.18	nnw.	16.9	
						1,500	852.4	2.3		18	1.30	nnw.	16.8	
9:31	1,007.0	8.8	54	nw.	5.4	1,406	872.4	2.5	0.38	18	1.32	nnw.	16.8	
						1,250	879.5	3.1		20	1.53	nnw.	15.2	
						1,000	906.8	4.1		23	1.88	nnw.	12.7	
						750	935.0	5.1		27	2.37	nnw.	10.2	
10:08	1,007.1	10.0	55	nnw.	5.4	516	962.3	5.9	1.04	30	2.79	nnw.	7.8	
						500	964.0	6.1		31	2.92	nnw.	7.7	
						250	994.0	8.7		45	5.06	nnw.	6.4	
10:18	1,007.1	9.8	51	nnw.	5.8	141	1,007.1	9.8		51	6.18	nnw.	5.8	Cloudless.

December 16, 1918.

A. M.														
7:13	1,008.2	3.2	26	e.	2.7	141	1,008.2	3.2		26	2.00	e.	2.7	4/10 Ci.St., wnw.
						250	994.8	7.9		58	6.18	ese.	8.5	
7:15	1,008.2	3.2	91	e.	2.7	265	993.1	8.6	−4.35	62	6.93	ese.	9.3	
						500	965.0	8.8		49	5.55	se.	8.5	
						750	937.0	9.1		36	4.16	se.	7.6	
						1,000	909.9	9.4		23	2.71	sse.	6.7	5/10 Ci.St., wnw.; 2/10 A.St., w.
9:42	1,009.4	9.2	69	ese.	2.7	1,141	895.0	9.5	−0.10	15	1.78	sse.	6.2	
						1,250	883.2	9.3		15	1.76	sse.	6.1	
						1,500	857.1	8.8		14	1.59	sse.	5.8	
						1,750	832.0	8.4		13	1.43	sse.	5.6	
						2,000	807.0	7.9		12	1.28	sse.	5.3	6/10 Ci.St., wnw.; 2/10 A.St., w.
10:35	1,009.3	12.4	56	sse.	4.0	2,045	802.6	7.8	0.42	12	1.27	sse.	5.3	
						2,000	807.0	7.9		12	1.28	sse.	5.4	
						1,750	832.0	8.5		11	1.22	sse.	5.8	
						1,500	857.1	9.1		11	1.27	s.	6.1	
						1,250	883.2	9.7		10	1.20	s.	6.5	
11:10	1,009.1	14.1	49	sse.	4.5	1,006	909.4	10.3	−1.40	10	1.25	s.	6.9	
						1,000	910.2	10.2		10	1.24	s.	6.9	
11:12	1,009.0	14.2	49	sse.	4.8	842	927.6	8.0	0.88	14	1.50	s.	7.7	
						750	938.0	8.8		18	1.90	s.	7.5	
						500	966.7	11.0		29	3.81	s.	6.8	
						250	996.1	13.2		40	6.07	sso.	6.1	
11:22	1,008.9	14.2	45	sse.	5.8	141	1,008.9	14.2		45	7.29	sso.	5.8	7/10 Ci.St., wnw.

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 17, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
7:09	1,004.8	8.4	81	e.	2.7	141	1,004.8	8.4	.....	81	8.93	e.	2.7	8/10 A.Cu., w.
						250	991.7	9.4	.....	72	8.49	ese.	6.7	
7:11	1,004.8	8.4	81	e.	3.6	425	971.0	11.0	−0.92	57	7.48	ese.	13.1	
						500	962.6	10.7	.....	59	7.59	ese.	13.1	
						750	934.0	9.6	.....	66	7.89	se.	13.0	
7:37	1,004.9	8.4	78	ese.	3.6	1,000	906.1	8.6	.....	74	8.27	sse.	12.9	6/10 A.Cu., w.
						1,247	879.6	7.5	0.43	81	8.40	s.	12.8	
						1,500	852.7	7.5	.....	63	6.53	s.	13.4	
						1,750	827.2	7.5	.....	46	4.77	s.	14.0	
						2,000	802.5	7.5	.....	28	2.90	s.	14.6	
8:01	1,005.1	9.0	75	ese.	3.6	2,189	784.7	7.5	0.00	15	1.56	s.	15.1	
						2,250	778.4	7.2	.....	15	1.52	s.	15.1	4/10 A.St., wsw.; 5/10 A.Cu., w.
						2,500	755.1	5.7	.....	14	1.28	s.	14.9	
						2,750	732.5	4.3	.....	14	1.16	s.	14.7	
						3,000	710.5	2.9	.....	13	0.98	s.	14.5	
						3,250	689.0	1.5	.....	13	0.89	s.	14.4	
						3,500	667.9	0.1	.....	12	0.74	s.	14.2	
8:44	1,005.3	11.0	62	ese.	4.5	3,627	657.5	−0.6	0.56	12	0.70	s.	14.1	
						3,750	647.3	−1.6	.....	22	1.18	s.	13.3	
						4,000	627.2	−3.7	.....	42	1.88	s.	11.7	5/10 A.St., wsw.; 4/10 A.Cu., w.
						4,250	607.5	−5.8	.....	63	2.36	s.	10.1	
9:36	1,005.4	12.5	55	ese.	6.3	4,303	603.0	−6.2	0.71	67	2.43	s.	9.8	
						4,250	607.5	−5.9	.....	66	2.45	s.	10.0	
						4,000	627.2	−4.4	.....	61	2.57	s.	11.1	2/10 A.St., wsw.
						3,750	647.3	−3.0	.....	56	2.66	s.	12.2	7/10 A.Cu., w.
						3,500	667.6	−1.5	.....	51	2.75	ssw.	13.2	6/10 A.St., wsw.; 3/10 A.Cu., w.
						3,250	688.2	0.0	.....	46	2.81	ssw.	14.3	8/10 A.St., wsw.; 2/10 A.Cu., w.
10:44	1,004.9	14.0	50	se.	7.2	3,177	694.3	0.4	0.42	44	2.77	ssw.	14.6	
						3,000	709.6	1.1	.....	39	2.58	ssw.	14.6	
						2,750	731.9	2.2	.....	32	2.29	ssw.	14.6	
						2,500	754.8	3.2	.....	24	1.85	ssw.	14.6	
						2,250	778.4	4.2	.....	17	1.40	ssw.	14.6	
11:07	1,004.6	14.1	50	se.	5.4	2,214	781.4	4.4	0.27	16	1.34	ssw.	14.6	
						2,000	802.5	5.0	.....	28	2.44	ssw.	13.9	4/10 A.St., wsw.; 4/10 A.Cu., w.; few St.Cu., s.
						1,750	827.2	5.6	.....	43	3.91	ssw.	13.1	
						1,500	852.7	6.3	.....	57	5.44	s.	12.3	
						1,250	879.0	7.0	.....	72	7.21	s.	11.5	
11:33	1,004.3	14.5	48	ese.	4.9	1,094	895.7	7.4	0.55	81	8.34	s.	11.0	
						1,000	906.1	7.9	.....	77	8.20	s.	10.4	
						750	934.0	9.3	.....	66	7.74	sse.	8.8	7/10 A.St., wsw.; 2/10 A. Cu., w.
11:46	1,004.2	14.5	52	ese.	4.0	604	950.4	10.1	0.91	59	7.20	se.	7.9	
						500	962.6	11.0	.....	57	7.48	se.	6.9	
						250	991.5	13.3	.....	52	7.94	ese.	4.2	
P. M.														
12:52	1,004.1	14.3	50	ese.	3.1	141	1,004.1	14.3	.....	50	8.15	ese.	3.1	2/10 A.St., wsw.; 8/10 A.Cu., w.

December 18, 1918.

P. M.														
2:53	1,002.7	14.9	80	nne.	4.9	141	1,002.7	14.9	.....	80	13.55	nne.	4.9	10/10 St.Cu., se.
						250	990.2	14.4	.....	80	13.12	nne.	5.1	
						500	961.9	13.1	.....	80	12.04	ene.	5.6	
						750	933.4	11.9	.....	80	11.14	e.	6.0	
4:28	1,003.0	14.8	79	nne.	4.5	852	921.9	11.4	0.49	80	10.78	e.	6.2	
						1,000	905.5	10.8	.....	79	10.23	e.	6.3	Altitude of St. Cu. base about 1,000 m.
						1,250	878.4	9.8	.....	77	9.33	e.	6.5	
						1,500	852.8	8.8	.....	75	8.50	ese.	6.7	
						1,750	827.8	7.7	.....	73	7.67	ese.	6.9	
4:50	1,003.3	15.0	77	nne.	4.0	1,819	817.8	7.3	0.41	72	7.37	ese.	7.0	
						2,000	803.1	6.6	.....	74	7.22	ese.	6.3	
						2,250	778.7	5.3	.....	78	6.95	ese.	5.3	
5:13	1,003.4	15.2	78	nne.	3.6	2,335	770.6	4.9	0.36	79	6.84	ese.	4.9	
						2,250	778.7	5.1	.....	79	6.94	ese.	5.4	
						2,000	803.1	5.7	.....	79	7.23	ese.	6.9	
						1,750	827.7	6.2	.....	80	7.58	se.	8.3	
5:34	1,003.4	15.0	79	nne.	4.0	1,623	840.1	6.5	0.51	80	7.74	se.	9.1	
						1,500	852.2	7.1	.....	80	8.07	se.	8.8	
						1,250	878.0	8.4	.....	80	8.82	se.	8.1	Altitude of St.Cu. base about 1,150 m.
						1,000	905.5	9.7	.....	81	9.74	ese.	7.5	
						750	933.4	10.9	.....	81	10.56	ese.	6.9	
5:54	1,003.4	15.0	78	nne.	3.6	721	936.6	11.1	0.59	81	10.70	ese.	6.8	
						500	961.9	12.4	.....	81	11.66	ene.	5.6	
						250	991.0	13.9	.....	80	12.70	ne.	4.2	
6:04	1,003.4	14.5	80	nne.	3.6	141	1,003.4	14.5	.....	80	13.21	nne.	3.6	10/10 St.Cu., se.

December 19, 1918.

A. M.														
10:17	999.4	12.0	94	e.	5.8	141	999.4	12.0	.....	94	13.19	e.	5.8	10/10 St., se.
						250	986.7	11.6	.....	95	12.98	e.	8.9	Altitude of St. base about 300 m.
						500	957.6	10.6	.....	97	12.40	se.	16.1	
10:25	999.4	12.0	97	e.	6.3	591	947.1	10.2	0.40	98	12.20	se.	18.7	Rain from beginning of flight to 10:29 a. m.
						750	929.0	11.2	.....	96	12.77	sse.	18.8	
10:34	999.3	12.1	96	e.	6.3	770	926.9	11.3	−0.61	96	12.85	sse.	18.8	
						1,000	900.7	10.4	.....	97	12.23	sse.	17.2	
						1,250	873.7	9.4	.....	98	11.55	sse.	15.5	
						1,500	848.1	8.3	.....	98	10.73	se.	13.8	
						1,750	823.6	7.3	.....	99	10.13	se.	12.0	
11:08	998.8	12.3	96	ese.	7.2	2,001	798.6	6.3	0.41	100	9.55	se.	10.3	
						2,250	774.8	5.0	.....	100	8.72	se.	10.4	
						2,500	750.9	3.8	.....	100	8.02	sse.	10.5	
						2,750	728.1	2.5	.....	100	7.31	sse.	10.5	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 19, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
11:40	908.1	12.6	93	ese.	8.9	2,904	714.2	1.7	0.44	100	6.91	ese.	10.6	
						2,750	728.1	2.3		100	7.21	ese.	10.0	
						2,500	750.4	3.2		100	7.69	ese.	8.9	
						2,250	773.8	4.1		100	8.19	ese.	7.8	
11:56	907.7	12.6	93	ese.	7.6	2,146	783.5	4.5	0.48	100	8.42	ese.	7.4	
						2,000	798.0	5.2		100	8.85	sse.	9.1	Rain from 12:05 p. m. to end of flight.
						1,750	822.5	6.4		100	9.61	ese.	12.0	
P. M.														
12:12	907.4	12.4	96	ese.	9.4	1,625	834.5	7.0	0.35	100	10.02	sse.	13.5	
						1,500	847.0	7.4		100	10.30	sse.	13.0	
						1,250	872.5	8.3		99	10.84	se.	12.0	
						1,000	899.3	9.2		98	11.41	se.	11.0	
						750	927.5	10.1		98	12.11	se.	10.0	
						500	956.0	10.9		97	12.65	ese.	9.0	Altitude of St. base about 350 m.
						250	985.3	11.8		96	13.29	ese.	8.0	
12:27	907.2	12.2	96	ese.	7.6	141	997.2	12.2		96	13.78	ese.	7.6	

December 20, 1918.

A. M.														
10:28	996.4	13.9	75	nw.	4.5	141	996.4	13.9		75	11.91	nw.	4.5	Few Cl.St., w.; 2/10 A.Cu., sw.; few St.Cu., sw.
						250	983.7	13.1		72	10.86	nw.	5.1	
						500	954.3	11.3		65	8.70	wnw.	6.6	
P. M.														
12:04	995.5	14.8	57	nw.	4.5	576	945.3	10.8	0.82	63	8.16	wnw.	7.0	
						500	954.3	11.5		62	8.41	wnw.	6.5	
						250	983.2	13.8		59	9.31	nw.	4.8	
12:10	995.4	14.8	57	nw.	4.0	141	995.4	14.8		57	9.59	nw.	4.0	Few Cl.St., sw.; few A.St., sw.; few St.Cu., sw.

December 22, 1918.

A. M.														
7:10	1,001.0	8.0	87	n.	5.8	141	1,001.0	8.0		87	9.02	n.	5.8	1/10 A.Cu., s.
7:19	1,001.1	8.1	86	n.	6.3	236	989.8	12.0	−4.21	63	8.84	nne.	9.0	
						250	988.7	12.0		62	8.70	nne.	9.0	
						500	959.8	11.3		57	7.63	ne.	8.8	
						750	931.5	10.7		53	6.69	ene.	8.6	
						1,000	904.0	10.0		47	5.77	e.	8.5	
						1,250	877.1	9.4		42	4.95	ese.	8.3	3/10 A.St., ssw.
8:15	1,001.4	8.2	85	nne.	7.2	1,388	862.1	9.0	0.26	39	4.48	ese.	8.2	
						1,500	850.9	8.5		41	4.55	ese.	8.4	
						1,750	824.8	7.3		45	4.60	ese.	8.7	
						2,000	800.0	6.2		49	4.65	se.	9.0	
						2,250	776.2	5.1		53	4.66	se.	9.3	
						2,500	753.3	3.9		57	4.61	se.	9.6	
8:40	1,001.6	9.1	82	ne.	6.7	2,551	748.5	3.7	0.46	58	4.62	se.	9.7	
						2,750	730.7	2.8		53	3.96	se.	10.4	
						3,000	708.0	1.5		46	3.12	sse.	11.4	
						3,250	686.7	0.5		41	2.60	sse.	12.1	
						3,500	665.8	−0.6		34	1.98	s.	13.0	
						3,750	645.5	−1.7		28	1.48	s.	13.8	
						4,000	625.5	−2.9		22	1.06	s.	14.7	
						4,250	605.5	−4.0		16	0.70	ssw.	15.6	
9:42	1,002.2	12.3	72	nne.	5.4	4,290	602.1	−4.2	0.40	15	0.64	ssw.	15.7	3/10 A.St., sw.; few St.Cu., se.
						4,250	605.5	−4.1		15	0.65	ssw.	15.6	Altitude of St. base about 1,800 m.
						4,000	625.5	−3.2		18	0.84	ssw.	14.7	
						3,750	645.5	−2.3		21	1.06	s.	13.9	2/10 Cl.St., sw.; few A.St., sw.
						3,500	665.8	−1.4		24	1.31	s.	13.1	Solar halo, partial and faint from 10:10 to
						3,250	686.7	−0.5		27	1.58	s.	12.3	11:05 a. m.
						3,000	708.0	0.4		30	1.89	sse.	11.5	
						2,750	730.1	1.2		33	2.20	sse.	10.6	
10:24	1,002.4	13.2	68	nne.	5.4	2,705	733.7	1.4	0.44	33	2.33	sse.	10.5	
						2,500	752.7	2.3		33	2.38	sse.	11.1	3/10 Cl.St., sw.; 2/10 St.Cu., se.
						2,250	775.7	3.4		33	2.57	sse.	11.9	
						2,000	799.7	4.5		34	2.86	se.	12.6	
						1,750	824.8	5.6		34	3.09	ese.	13.4	
						1,500	850.9	6.7		35	3.43	ese.	14.1	
10:57	1,002.4	14.8	60	nne.	5.4	1,477	853.4	6.8	0.36	36	3.56	ese.	14.2	
						1,250	877.1	7.6		44	4.59	ese.	12.3	Few Cl.St., sw.; 4/10 St.Cu., se.
						1,000	904.0	8.5		53	5.88	e.	10.3	
						750	931.5	9.4		61	7.19	e.	8.2	
11:23	1,002.0	14.4	69	nne.	4.5	567	952.3	10.1	0.87	68	8.40	e.	6.7	
						500	959.8	10.7		68	8.79	e.	6.4	
						250	989.0	12.9		69	10.27	nne.	5.1	
11:29	1,001.9	13.8	69	nne.	4.5	141	1,001.9	13.8		69	10.89	nne.	4.5	Few Cl.St., sw.; few St.Cu., se.

December 23, 1918.

A. M.														
12:51	993.5	8.0	82	wnw.	11.2	141	993.5	8.0		82	8.80	wnw.	11.2	7/10 St.Cu., wnw.
						250	980.7	6.9		84	8.36	wnw.	11.7	
						500	951.0	4.5		87	7.33	wnw.	12.9	
1:01	993.5	8.0	80	wnw.	10.3	557	944.5	3.9	0.99	88	7.11	wnw.	13.2	Altitude of St.Cu. base about 600 m.
						750	922.0	3.7		86	6.85	wnw.	14.3	
						1,000	894.0	3.4		83	6.47	wnw.	15.7	Few A.St., w.; 3/10 St.Cu., wnw.
1:26	993.5	9.0	75	nw.	11.6	1,059	888.0	3.3	0.12	82	6.35	wnw.	16.0	Altitude of St.Cu. base about 900 m.
1:28	993.5	9.1	75	nw.	12.5	1,207	872.0	6.0	−1.85	65	6.06	wnw.	14.8	
						1,250	867.0	5.9		63	5.85	wnw.	14.9	
						1,500	841.4	5.4		51	4.57	wnw.	15.3	Few A.St.; 5/10 St.Cu., wnw.
						1,750	816.0	4.8		39	3.35	w.	16.6	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 23, 1918—Continued.

Surface.						At different heights above sea.								
				Wind.						Humidity.		Wind.		
Time.	Pressure.	Temperature.	Relative humidity.	Dir.	Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Rel.	Vap. pres.	Dir.	Vel.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*	°	%	*mb.*		*m. p. s.*	
1:57	993.5	8.9	77	nnw.	12.5	1,886	802.5	4.5	0.22	33	2.78	w.	17.0	10/10 St.Cu., nw.
						2,000	791.1	4.8		30	2.58	w.	18.0	
1:59	993.5	8.8	78	nw.	12.5	2,058	785.7	5.0	−0.29	29	2.53	w.	18.5	Altitude of St.Cu. base about 700 m.
						2,250	767.2	3.6		24	1.90	w.	18.0	
						2,500	743.8	1.7		18	1.24	wsw.	17.3	
2:19	993.5	8.5	79	nnw.	10.3	2,640	730.8	0.6	0.62	14	0.89	wsw.	16.9	
						2,500	743.8	1.3		14	0.94	wsw.	17.0	
						2,250	766.8	2.5		13	0.95	wsw.	17.3	
						2,000	790.5	3.7		12	0.96	w.	17.5	7/10 St.Cu., nw.
2:45	993.5	7.6	80	wnw.	13.4	1,792	811.1	4.7	−1.06	12	1.02	w.	17.7	
						1,750	815.0	4.3		16	1.33	w.	17.4	
2:50	993.5	7.3	80	wnw.	15.2	1,707	819.6	3.8	0.14	21	1.68	w.	17.0	
						1,500	840.5	4.1		34	2.78	w.	17.0	
						1,250	867.0	4.4		49	4.10	wnw.	17.0	
						1,000	894.0	4.8		65	5.59	wnw.	17.0	
3:15	993.5	6.3	79	wnw.	17.0	922	902.4	4.9	−1.91	70	6.06	wnw.	17.0	
						750	922.0	1.6		83	5.60	wnw.	16.3	
3:19	993.5	6.2	77	wnw.	17.0	713	926.0	0.9	0.91	85	5.54	wnw.	16.1	
						300	951.0	2.8		83	6.20	wnw.	15.3	
						250	980.7	5.1		80	7.03	wnw.	14.3	
3:32	993.5	6.1	79	wnw.	13.9	141	993.5	6.1		79	7.44	wnw.	13.9	10/10 St.Cu., nw.

December 24, 1918.

A. M.														
7:36	1,004.9	−3.3	69	nnw.	10.3	141	1,004.9	−3.3		69	3.20	nnw.	10.3	Few A.St., w.; few St., nnw.
						250	991.5	−3.8		69	3.06	nnw.	12.0	
						500	960.5	−5.0		69	2.77	nnw.	15.9	
						750	930.5	−6.1		70	2.56	nnw.	19.7	
7:55	1,005.1	−3.3	67	nnw.	9.4	890	913.8	−6.8	0.47	70	2.41	nnw.	21.9	
						1,000	901.5	−5.5		67	2.57	nnw.	21.6	
						1,250	873.5	−2.4		62	3.10	nnw.	20.8	
8:00	1,005.1	−3.2	68	nnw.	8.9	1,285	869.2	−2.0	−1.22	61	3.15	nnw.	20.7	
						1,500	846.5	−1.9		52	2.71	nnw.	20.6	
						1,750	820.4	−1.7		41	2.18	nw.	20.4	
8:23	1,005.6	−3.0	64	nnw.	9.4	1,866	808.5	−1.6	−0.07	36	1.93	nw.	20.3	
						2,000	795.0	−2.2		36	1.83	nw.	19.4	
						2,250	770.4	−3.2		35	1.64	nw.	18.9	
						2,500	746.8	−4.2		34	1.46	wnw.	16.3	
8:52	1,006.2	−2.6	68	nnw.	9.8	2,729	725.4	−5.2	0.42	33	1.30	wnw.	14.8	
						2,500	747.1	−4.2		33	1.42	wnw.	13.1	
						2,250	771.2	−3.2		32	1.50	wnw.	11.2	
						2,000	796.2	−2.2		32	1.63	wnw.	9.3	
9:40	1,006.9	−1.9	60	nnw.	9.8	1,959	800.1	−2.0	−0.03	32	1.65	wnw.	9.0	
						1,750	822.0	−2.1		36	1.85	wnw.	12.2	
						1,500	848.4	−2.2		41	2.09	nw.	16.0	
10:06	1,007.2	−1.9	65	nnw.	8.0	1,384	860.3	−2.2	−0.74	43	2.19	nw.	17.7	3/10 A.St., w.
						1,250	875.5	−3.2		49	2.29	nw.	16.6	
						1,000	904.0	−5.1		60	2.39	nw.	14.5	
10:26	1,007.4	−1.4	65	nnw.	9.8	833	922.9	−6.3	0.77	68	2.44	nw.	13.1	
						750	932.9	−5.7		67	2.53	nw.	12.5	
						500	962.7	−3.8		66	2.93	nw.	10.7	
						250	994.0	−1.9		64	3.34	nnw.	8.4	
10:38	1,007.6	−1.0	63	nnw.	8.0	141	1,007.6	−1.0		63	3.54	nnw.	8.0	

December 25, 1918.

A. M.														
11:10	1,009.9	−1.0	65	nnw.	5.4	141	1,009.9	−1.0		65	3.65	nnw.	5.4	4/10 Cl.St., sw.
						250	995.3	−2.5		71	3.52	nnw.	4.4	
11:48	1,009.3	−0.8	65	nnw.	4.9	293	960.1	−3.1	1.38	73	3.44	nnw.	4.0	
						500	963.6	−3.1		65	3.06	nnw.	4.1	Partial solar halo from 10:55 to 11:00 a. m.
						750	934.0	−3.1		56	2.64	nnw.	4.3	
P. M.														
12:08	1,008.9	−0.8	63	nnw.	4.5	784	930.5	−3.1	0.06	55	2.59	nnw.	4.3	
						750	934.0	−3.1		56	2.64	nnw.	4.2	
						500	963.6	−2.8		63	3.05	nnw.	3.3	
12:17	1,008.7	−0.8	63	nnw.	5.4	334	984.5	−2.6	0.98	68	3.35	nnw.	2.7	
						250	994.6	−1.8		66	3.47	nnw.	3.9	
12:19	1,008.7	−0.7	64	nnw.	5.4	141	1,008.7	−0.7		64	3.69	nnw.	5.4	1/10 Cl.St., sw.; few St., n.

December 27, 1918.

A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:18	1,008.5	−0.7	90	w.	3.6	141	1,008.5	−0.7		90	5.18	w.	3.6	3/10 A.St., w.
						250	994.6	0.4		79	4.97	wnw.	4.9	
7:35	1,008.6	−0.8	89	w.	4.0	435	972.2	2.2	−0.99	61	4.37	nnw.	7.1	
						500	964.0	2.0		60	4.24	nnw.	7.6	
						750	934.5	1.1		58	3.84	nnw.	9.8	
						1,000	906.0	0.2		55	3.41	nw.	11.9	
						1,250	878.4	−0.8		52	2.97	nw.	14.0	
8:02	1,008.8	−0.2	84	w.	4.0	1,476	854.5	−1.4	0.35	50	2.72	nw.	15.9	
						1,500	851.7	−1.5		50	2.70	nw.	15.8	
						1,750	825.6	−2.3		45	2.27	nw.	15.2	7/10 A.St., w.
						2,000	800.0	−3.2		40	1.87	nw.	14.6	
						2,250	774.9	−4.0		35	1.53	nw.	14.0	
8:35	1,008.6	1.0	82	w.	3.6	2,428	757.8	−4.6	0.34	32	1.33	nw.	13.5	
						2,500	750.8	−4.7		31	1.28	nw.	13.9	
						2,750	727.1	−5.2		28	1.10	nw.	15.5	
						3,000	704.3	−5.6		26	0.99	wnw.	17.0	
						3,250	682.2	−6.1		23	0.84	wnw.	18.6	

TABLE 17.—*Free-air data from kite flights at Groesbeck Aerological Station, December, 1918*—Continued.

December 27, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
9:17	1,008.4	1.2	80	w.	4.0	3,481	662.2	−6.5	0.08	20	0.71	wnw.	20.0	
						3,250	682.2	−6.6		20	0.70	wnw.	18.5	
						3,000	704.3	−6.6		21	0.74	nw.	16.9	
						2 750	726.7	−6.7		21	0.73	nw.	15.2	5/10 A.St., w.
10:13	1,008.4	3.6	67	w.	3.6	2,697	751.5	−6.7	0.41	21	0.73	nw.	14.9	
						2,500	749.9	−5.9		24	0.89	nw.	14.5	
						2,250	774.1	−4.9		27	1.09	nw.	14.0	
						2,000	800 0	−3.9		31	1.37	nw.	13.6	
						1,750	825.6	−2.9		35	1.68	nw.	13.1	
						1,500	851.7	−1.8		38	2.00	nw.	12.6	
10:55	1,008.4	5.1	67	w.	2.7	1,442	858.0	−1.6	0.53	39	2.09	nw.	12.5	
						1,250	878.4	−0.6		39	2.27	nw.	12.0	
						1,000	906.0	0.8		40	2.59	wnw.	11.4	
						750	935.0	2.1		40	2.84	wnw.	10.8	
11:20	1,008.3	5.6	64	w.	3.1	563	957.3	3.1	0.45	40	3.05	wnw.	10.4	
						500	964.4	3.4		43	3.35	wnw.	9.4	
						250	994.6	4.5		56	4.72	w.	5.4	
11:31	1,008.2	5.0	62	w.	3.6	141	1,008.2	5.0		62	5.41	w.	3.6	7/10 A.St., w.
December 29, 1918.														
A. M.														
8:41	1,002.7	5.0	79	s.	3.1	141	1,002.7	5.0		79	6.89	s.	3.1	10/10 A.St., sw.
						250	989.2	7.1		68	6.86	s.	7.2	
8:43	1,002.7	5.0	79	s.	3.1	441	966.9	10.8	−1.93	50	6.48	s.	14.3	
						500	959.8	10.6		49	6.26	s.	14.2	
						750	931.3	9.6		45	5.38	s.	14.0	
						1,000	903.5	8.0		41	4.58	ssw.	13.8	
9:10	1,002.7	5.3	79	ssw.	4.0	1,250	876.6	7.6		37	3.86	ssw.	13.5	
						1,280	873 9	7.5	0.39	37	3.84	ssw.	13.5	
						1,500	850.2	6.4		35	3.36	ssw.	13.3	
						1,750	824.2	5.2		32	2.83	ssw.	13.1	
						2,000	799.5	4.0		30	2.44	ssw.	12.9	
9:35	1,002.5	6.0	76	ssw.	4.5	2,109	789.3	3.5	0.48	29	2.28	ssw.	12.8	
						2,250	775.3	3.1		27	2.06	ssw.	12.3	
						2,500	751.3	2.5		24	1.75	ssw.	11.5	
						2,750	728.5	1.9		22	1.54	sw.	10.6	
						3,000	706.6	1.3		19	1.27	sw.	9.8	
10:20	1,002.4	7.4	72	ssw.	4.5	3,060	701.8	1.1	0.28	18	1.19	sw.	9.6	
						3,000	706.6	1.3		18	1.21	sw.	9.9	
						2,750	728.5	2.1		18	1.28	sw.	11.1	
						2,500	751.3	2.8		17	1.27	ssw.	12.3	
						2,250	775.3	3.6		17	1.34	ssw.	14.0	
11:06	1,002.3	9.7	59	ssw.	7.2	2,123	787.6	4.0	0.32	17	1.38	ssw.	14.2	
						2,000	799.5	4.4		17	1.42	ssw.	14.2	
						1,750	824.2	5.2		18	1.59	ssw.	14.1	
						1,500	849.7	6.0		19	1.78	ssw.	14.1	
						1,250	875.8	6.8		20	1.98	ssw.	14.0	
11:32	1,001.8	10.0	55	ssw.	7.6	1,086	893.5	7.3	0.37	21	2.15	ssw.	14.0	
						1,000	902.8	7.5		23	2.39	ssw.	13.9	
						750	930.5	8.5		29	3.22	ssw.	13.5	
11:49	1,001.5	10.2	57	ssw.	5.4	593	948 2	9.1	−0.62	32	3.70	ssw.	13.4	
						500	958.9	8.5		39	4.33	ssw.	13.4	
11:52	1,001.4	10.3	56	ssw.	5.8	415	968.8	8.0	0.91	46	4.94	ssw.	13.4	
						250	988.2	9.5		52	6.17	ssw.	8.8	
11:55	1,001.4	10.5	56	ssw.	5.8	141	1,001.4	10.5		56	7.11	ssw.	5.8	10/10 A.St., sw.
December 30, 1918.														
A. M.														
7:45	995.2	14.7	93	s.	5.4	141	995.2	14.7		93	15.56	s.	5.4	10/10 St., s.
						250	982.5	14.5		92	15.19	s.	7.9	
						500	953.9	14.0		91	14.54	s.	14.0	Altitude of St. base about 350 m.
						750	926.4	13.5		89	13.37	s.	19.9	
8:01	995.2	14.7	93	s.	4.9	875	912.6	13.2	0.20	88	13.35	s.	22.9	
						1,000	899.0	12.5		89	12.90	s.	23.0	
						1,250	872.7	11.2		92	12.24	ssw.	23.2	
						1,500	846.7	9.9		95	11.59	sw.	23.3	
8:24	995.5	15.0	93	s.	4.9	1,577	839.2	9.5	0.48	96	11.40	sw.	23.4	
						1,500	846.7	9.8		96	11.64	sw.	22.9	
						1,250	872.9	10.9		97	12.65	sw.	21.4	
						1,000	899.6	11.9		98	13.65	ssw.	20.0	
						750	927.2	12.9		99	14.73	ssw.	18.4	
8:48	995.8	15.5	93	s.	4.9	543	949.7	13.8	0.57	100	15.78	ssw.	17.2	
						500	954.8	14.0		99	15.82	ssw.	16.1	
						250	983.3	15.5		94	16.55	s.	9.9	
9:14	995.9	16.1	92	s.	7.2	141	995.9	16.1		92	16.84	s.	7.2	10/10 St., s.
December 31, 1918.														
A. M.														
10:47	992.6	7.8	95	nnw.	5.4	141	992.6	7.8		95	10.05	nnw.	5.4	10/10 St., nnw.
						250	979.6	6.8		96	9.48	nnw.	5.6	
11:01	992.5	7.2	97	nnw.	6.7	370	965.1	5.7	0.92	98	8.98	nnw.	5.9	Altitude of St. base about 250 m.
						500	950.1	6.6		98	9.61	nnw.	5.5	
11:33	992.5	6.5	97	nnw.	5.5	529	946.5	6.8	−1.00	98	9.68	nnw.	5.4	
						500	950.1	6.5		98	9.68	nnw.	6.0	
P. M.														
12:46	992.3	5.9	95	nnw.	5.8	287	974.6	4.1	1.23	96	7.86	nnw.	10.1	Rain from 10:02 a. m. to 12:1 (p. m.
						250	979.6	4.6		96	8.14	nnw.	9.0	
12:48	992.3	5.9	95	nnw.	5.8	141	992.3	5.9		95	8.83	nnw.	5.8	10/10 St., nnw.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918.*

October 1, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C*	%		*m. p. s.*	*m.*	*mb.*	°*C*		%	*mb.*		*m. p. s.*	
7:42	1,001.8	8.2	75	se.	4.0	225	1,001.8	8.2	.....	75	8.15	se.	4.0	1/10 Cl.Cu., w.; 8/10 A.St., w.
						250	998.7	8.2	.....	74	8.04	se.	4.4	
						500	969.0	8.6	.....	61	6.81	ese.	10.6	
8:00	1,001.7	9.4	72	ese.	5.8	625	954.5	8.8	—0.15	55	6.23	ese.	10.8	
						750	940.4	8.8	.....	50	5.66	se.	10.1	
						1,000	912.2	8.8	.....	41	4.65	sse.	8.8	
						1,250	885.3	8.7	.....	32	3.60	ssw.	7.4	
8:48	1,001.7	9.3	71	ese.	5.4	1,396	869.6	8.7	0.01	26	2.92	ssw.	6.6	
						1,500	858.6	8.6	.....	33	3.69	ssw.	6.6	
						1,750	832.9	8.4	.....	50	5.51	sw.	6.6	
						2,000	808.1	8.2	.....	67	7.28	sw.	6.7	
						2,250	784.2	7.9	.....	84	8.95	wsw.	6.7	
9:58	1,001.3	12.1	56	se.	5.8	2,292	780.2	7.9	0.09	87	9.27	wsw.	6.7	Rain from 9:58 to 10:05 a. m.
						2,500	760.8	7.6	.....	87	9.08	wsw.	8.4	
						2,750	738.1	7.2	.....	88	8.94	wsw.	10.5	Altitude of A.St. base about 3,450 m.
						3,000	716.2	6.8	.....	88	8.69	wsw.	12.5	
						3,250	694.9	6.4	.....	89	8.55	wsw.	14.6	
						3,500	673.5	6.0	.....	90	8.42	wsw.	16.7	
10:13	1,001.2	12.4	57	se.	8.0	3,717	655.6	5.6	0.12	90	8.13	wsw.	18.5	10/10 A.St., w.
						3,500	673.5	5.6	.....	90	8.13	wsw.	17.7	
						3,250	694.0	5.9	.....	89	8.27	wsw.	16.7	
						3,000	714.7	6.1	.....	88	8.29	wsw.	15.7	
						2,750	736.5	6.3	.....	88	8.40	wsw.	14.8	
						2,500	759.5	6.5	.....	87	8.42	wsw.	13.8	
11:02	1,000.7	13.0	49	ese.	5.4	2,360	772.8	6.6	0.09	87	8.48	wsw.	13.3	
						2,250	783.0	6.7	.....	83	8.14	wsw.	12.9	
						2,000	807.0	6.9	.....	73	7.26	wsw.	11.9	
						1,750	831.9	7.2	.....	63	6.40	sw.	11.0	
						1,500	857.7	7.4	.....	53	5.46	sw.	10.0	
11:22	1,000.6	13.0	47	e.	5.8	1,300	878.7	7.6	0.06	45	4.70	sw.	9.3	
						1,250	884.3	7.6	.....	45	4.70	sw.	9.0	
						1,000	911.5	7.8	.....	47	4.97	ssw.	7.7	
						750	939.4	7.9	.....	49	5.22	s.	6.3	
11:40	1,000.4	12.4	47	se.	5.8	603	955.9	8.0	1.19	50	5.36	sse.	5.5	
						500	968.0	9.3	.....	49	5.74	sse.	5.5	
						250	997.4	12.2	.....	48	6.82	se.	5.4	
11:46	1,000.4	12.5	48	se.	5.4	225	1,000.4	12.5	.....	48	6.96	se.	5.4	10/10 A.St., nw.

October 4, 1918 (No. 1).

A. M.														
7:50	999.7	11.0	78	se.	4.5	225	999.7	11.0	.....	78	10.24	se.	4.5	9/10 A.St., sw.
						250	996.7	11.2	.....	76	10.11	se.	4.8	
						500	967.4	13.8	.....	50	7.89	sse.	7.8	
8:00	999.6	11.6	76	se.	3.6	710	943.6	15.9	—1.01	29	5.24	sse.	10.4	
						750	939.0	15.8	.....	30	5.38	sse.	10.4	
						1,000	911.9	15.3	.....	34	5.91	ssw.	10.6	
8:57	999.3	15.4	59	sse.	4.5	1,205	890.3	14.8	0.22	38	6.40	sw.	10.8	
						1,250	885.7	14.6	.....	38	6.32	sw.	10.8	
						1,500	859.7	13.7	.....	41	6.43	sw.	10.5	
						1,750	834.5	12.8	.....	43	6.36	sw.	10.3	
						2,000	810.0	11.8	.....	46	6.37	sw.	10.1	
9:22	998.9	16.6	58	sse.	4.5	2,134	797.3	11.3	0.38	47	6.29	sw.	10.0	
						2,250	786.0	11.0	.....	51	6.70	sw.	10.0	
						2,500	762.5	10.2	.....	58	7.22	sw.	10.1	
						2,750	740.0	9.5	.....	66	7.83	wsw.	10.1	
						3,000	718.6	8.8	.....	74	8.38	wsw.	10.2	
10:08	998.2	19.6	51	s.	7.2	3,124	708.0	8.4	0.29	78	8.60	wsw.	10.2	
						3,250	697.5	7.9	.....	77	8.20	wsw.	10.8	
						3,500	676.5	6.7	.....	76	7.46	wsw.	12.1	
						3,750	656.0	5.6	.....	75	6.82	wsw.	13.4	
						4,000	635.5	4.5	.....	74	6.23	wsw.	14.6	5/10 Cl.Cu., w.
10:42	997.6	21.6	47	s.	4.9	4,163	622.8	3.8	0.32	73	5.85	wsw.	15.5	
						4,000	635.5	4.1	.....	73	5.98	wsw.	16.7	
						3,750	654.7	4.6	.....	74	6.28	wsw.	18.5	
11:02	997.3	22.0	45	s.	8.5	3,551	670.1	5.0	0.33	74	6.45	wsw.	19.9	
						3,500	674.7	5.2	.....	74	6.55	wsw.	19.4	
						3,250	695.4	6.0	.....	74	6.92	wsw.	16.9	
						3,000	716.6	6.9	.....	74	7.36	sw.	14.3	
						2,750	738.7	7.7	.....	74	7.78	sw.	11.8	
11:21	996.8	22.0	41	s.	8.5	2,685	744.3	7.9	0.38	74	7.88	sw.	11.2	
						2,500	761.2	8.6	.....	68	7.60	sw.	11.3	
						2,250	784.4	9.6	.....	59	7.05	ssw.	11.5	
						2,000	808.0	10.5	.....	51	6.48	ssw.	11.7	
						1,750	832.5	11.5	.....	42	5.70	s.	11.9	
11:41	996.3	23.2	41	s.	6.3	1,561	851.4	12.2	0.59	36	5.12	s.	12.0	
						1,500	857.7	12.6	.....	36	5.25	s.	11.9	
						1,250	883.5	14.0	.....	36	5.75	s.	11.5	
						1,000	909.7	15.5	.....	35	6.16	ssw.	11.1	
						750	936.8	17.0	.....	35	6.78	ssw.	10.6	
11:54	996.0	23.7	34	ssw.	8.0	727	939.5	17.1	1.37	35	6.82	ssw.	10.6	
						500	964.2	20.2	.....	34	8.05	ssw.	10.1	Partial solar halo from 12:10 to 12:30 p. m.
						250	992.6	23.7	.....	33	9.67	ssw.	9.5	
P. M.														
12:03	995.8	24.0	33	ssw.	9.4	225	995.8	24.0	.....	33	9.85	ssw.	9.4	6/10 Cl.St., w.; few Cl.Cu., w.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 4, 1918 (No. 2).

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	
A. M.	*mb.*	°*C*	%		*m. p. s.*	m.	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
12:35	995.3	24.3	30	ssw.	6.7	225	995.3	24.3	.....	30	9.12	ssw.	6.7	6/10 Cl.St., w.
						250	992.3	24.2	.....	30	9.06	ssw.	6.9	
						500	964.4	22.5	.....	33	9.00	ssw.	8.6	
12:44	995.2	24.8	32	ssw.	6.7	644	948.4	21.6	0.64	35	9.03	ssw.	9.6	
						750	936.9	21.1	.....	36	9.01	ssw.	10.6	
12:56	995.0	24.8	33	ssw.	6.7	1,000	910.0	19.8	.....	38	8.78	ssw.	13.1	
						1,154	893.8	19.0	0.51	40	8.79	ssw.	14.7	
						1,250	883.6	18.7	.....	42	9.06	ssw.	14.6	
						1,500	857.9	18.0	.....	47	9.70	ssw.	14.4	
						1,750	833.0	17.2	.....	51	10.00	sw.	14.1	
						2,000	809.0	16.4	.....	56	10.44	sw.	13.9	
1:19	994.6	24.7	34	ssw.	5.9	2,209	789.8	15.8	0.30	60	10.77	sw.	13.7	3/10 Cl., w.; 2/10 Cl.St., w.
						2,250	786.1	15.6	.....	60	10.63	sw.	13.8	
						2,500	758.4	14.0	.....	62	9.91	sw.	14.3	
						2,750	741.0	12.5	.....	64	9.27	wsw.	14.8	
						3,000	719.0	10.9	.....	66	8.61	wsw.	15.2	
1:55	994.0	24.8	35	ssw.	6.3	3,132	707.3	10.1	0.62	67	8.28	wsw.	15.5	
						3,250	697.1	10.1	.....	58	7.17	wsw.	15.2	
2:10	993.8	24.7	36	ssw.	7.4	3,437	681.1	10.0	0.10	43	5.28	wsw.	14.7	
						3,250	696.7	10.3	.....	41	5.14	wsw.	15.4	
2:29	993.6	24.8	36	ssw.	6.7	3,036	714.3	10.7	0.29	38	4.89	wsw.	16.1	
						3,000	717.5	11.4	.....	43	5.80	wsw.	16.5	
						2,750	739.2	12.1	.....	48	6.78	wsw.	17.0	
						2,500	756.5	12.9	.....	53	7.89	wsw.	17.4	
						2,250	784.5	13.6	.....	59	9.19	wsw.	17.9	
2:52	993.3	24.7	37	ssw.	6.3	2,138	794.8	13.9	0.48	61	9.69	wsw.	18.1	
						2,000	808.0	14.6	.....	59	9.81	wsw.	17.5	
						1,750	832.0	15.8	.....	54	9.69	sw.	16.3	
						1,500	856.9	16.9	.....	50	9.62	sw.	15.2	
3:05	993.1	24.8	37	ssw.	6.7	1,403	866.6	17.4	0.60	48	9.54	sw.	14.8	
						1,250	882.1	18.3	.....	47	9.88	sw.	14.8	
						1,000	908.0	19.8	.....	44	10.16	ssw.	14.9	
						750	934.6	21.3	.....	42	10.64	ssw.	14.9	
3:31	992.8	24.0	37	ssw.	5.9	648	945.7	21.9	0.45	41	10.77	ssw.	14.9	
						500	961.5	22.6	.....	40	10.97	ssw.	11.3	
						250	989.4	23.7	.....	38	11.14	ssw.	5.3	
3:38	992.8	23.8	38	ssw.	4.8	225	992.8	23.8	.....	38	11.21	ssw.	4.8	

October 4, 1918 (No. 3).

P. M.														
4:15	992.4	23.0	42	ssw.	5.4	225	992.4	23.0	.....	42	11.80	ssw.	5.4	8/10 A.St., w.
						250	989.4	22.9	.....	42	11.73	ssw.	5.8	
						500	961.5	22.0	.....	41	10.84	ssw.	10.2	
4:21	992.4	22.6	44	ssw.	5.4	583	952.2	21.7	0.36	41	10.64	ssw.	11.7	
						750	934.0	21.1	.....	41	10.26	ssw.	12.8	
						1,000	907.0	20.2	.....	41	9.71	sw.	14.7	
						1,250	881.3	19.4	.....	41	9.24	wsw.	16.5	
						1,500	856.1	18.5	.....	41	8.73	wsw.	18.3	
						1,750	831.8	17.6	.....	41	8.25	w.	20.1	
4:58	992.2	21.7	42	ssw.	5.8	1,863	820.4	17.2	0.35	41	8.04	w.	20.9	
						2,000	807.7	16.5	.....	41	7.70	w.	20.5	
						2,250	783.8	15.3	.....	41	7.13	w.	19.8	
						2,500	760.2	14.1	.....	41	6.60	w.	19.1	
						2,750	738.0	12.9	.....	41	6.10	w.	18.4	
5:36	991.8	21.1	43	ssw.	6.7	3,001	715.8	11.7	0.42	41	5.64	w.	17.7	2/10 Cl.St., w.; 8/10 A.St., w.
						2,750	736.8	12.6	.....	42	6.13	w.	19.6	
						2,500	758.8	13.5	.....	42	6.50	w.	21.5	
5:57	991.5	20.7	46	ssw.	5.4	2,494	759.4	13.5	0.23	42	6.50	w.	21.5	
						2,250	782.0	14.1	.....	40	6.44	w.	21.9	
						2,000	805.6	14.6	.....	38	6.32	w.	22.2	
						1,750	829.7	15.2	.....	36	6.22	w.	22.6	
6:12	991.4	20.7	48	ssw.	5.8	*1,562	848.1	15.6	.....	35	6.20	w.	22.9	

October 10, 1918.

A. M.														
7:42	996.0	13.3	57	sse.	3.1	225	996.0	13.3	.....	57	8.70	sse.	3.1	7/10 Cl., nw.
						250	992.7	13.4	.....	56	8.61	w.	3.2	
						500	964.0	14.9	.....	41	6.95	nw.	4.6	
7:50	996.0	13.7	57	sse.	2.7	525	961.2	15.1	−0.60	39	6.69	nnw.	4.8	Partial solar halo at 7:57 a. m. and continued at end of flight.
						750	936.0	14.0	.....	41	6.55	wsw.	4.7	
						1,000	908.5	12.8	.....	42	6.21	sse.	4.6	
8:30	995.6	15.2	53	sse.	3.1	1,071	900.9	12.4	0.49	43	6.19	se.	4.6	
						1,250	881.6	11.0	.....	44	5.78	se.	4.7	
						1,500	855.1	9.1	.....	45	5.20	se.	4.8	
						1,750	829.8	7.2	.....	47	4.78	sse.	4.9	
10:00	994.9	20.6	52	sw.	3.6	1,962	809.0	5.6	0.76	48	4.37	sse.	5.0	
						2,000	805.1	5.6	.....	47	4.28	sse.	4.9	
						2,250	781.0	5.8	.....	38	3.50	s.	4.5	4/10 Cl., nw.
10:28	994.6	21.8	46	ssw.	3.6	2,454	761.8	6.0	−0.04	30	2.80	s.	4.1	
						2,250	781.0	6.0	.....	30	2.80	s.	5.4	
						2,000	805.1	6.0	.....	30	2.80	ssw.	7.0	
10:44	994.4	22.0	41	s.	4.5	1,931	811.5	6.0	0.73	30	2.80	ssw.	7.4	
						1,750	829.2	7.3	.....	35	3.58	ssw.	7.1	
						1,500	854.0	9.2	.....	42	4.99	ssw.	6.8	
						1,250	880.5	11.0	.....	50	6.56	ssw.	6.4	

*Kites broke away at 6:08 p. m.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 10, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
11:03	994.1	22.0	42	ssw.	4.5	1,235	882.6	11.1	0.88	50	6.60	ssw.	6.4	
						1,000	907.4	13.2		49	7.43	ssw.	6.1	
						750	934.7	15.4		49	8.58	ssw.	5.8	
						500	962.7	17.6		48	9.66	ssw.	5.5	
11:24	993.7	22.2	40	ssw.	4.0	437	969.5	18.1	1.93	48	9.97	ssw.	5.4	
						250	991.0	21.8		42	10.97	ssw.	4.2	
11:31	993.5	22.2	41	ssw.	4.0	225	993.5	22.2		41	10.98	ssw.	4.0	6/10 Ci., nw.
October 12, 1918.														
A. M.														
9:48	990.2	16.0	88	w.	4.9	225	990.2	16.0		88	16.00	w.	4.9	10/10 St.Cu., wsw.
						250	987.5	15.9		88	15.90	w.	4.9	
						500	958.9	14.4		92	15.09	w.	4.4	
						750	930.8	13.0		95	14.23	w.	4.9	Altitude of St.Cu. base about 500 m.
10:16	990.2	16.2	88	w.	5.4	880	916.5	12.2	0.58	97	13.78	w.	3.7	
						1,000	903.5	12.3		90	12.88	w.	4.3	
10:47	990.2	16.8	85	wsw.	5.4	1,239	878.2	12.5	−0.08	77	11.16	wnw.	5.5	
						1,250	876.8	12.5		77	11.16	wnw.	5.5	
						1,500	850.6	11.9		66	9.19	wnw.	6.5	
						1,750	825.5	11.3		54	7.23	wnw.	7.4	
						2,000	801.4	10.6		43	5.50	nw.	8.4	
						2,250	777.9	10.0		32	3.93	nw.	9.3	
11:10	990.1	17.5	82	sw.	5.8	2,344	769.4	9.8	0.24	28	3.39	nw.	9.7	
						2,500	754.7	8.6		32	3.57	nw.	10.2	
						2,750	732.3	6.8		39	3.85	nnw.	11.1	
						3,000	710.4	4.9		47	4.07	n.	11.9	7.10 A.Cu., wsw.
11:45	989.7	18.1	81	sw.	5.8	3,048	700.1	4.5	0.75	48	4.04	n.	12.1	
						3,250	688.7	3.9		44	3.56	n.	11.7	
						3,500	667.2	3.2		39	3.00	n.	11.1	
						3,750	646.5	2.4		34	2.47	nnw.	10.5	
						4,000	625.8	1.7		29	2.00	nnw.	10.0	2/10 Cu., wsw.
P. M.														
12:57	987.9	20.0	74	sw.	6.3	4,082	619.5	1.4	0.15	27	1.83	nnw.	9.8	
						4,000	625.6	1.5		27	1.84	nnw.	9.7	
						3,750	645.0	1.7		28	1.93	nw.	9.4	
						3,500	665.0	2.0		28	1.98	nw.	9.0	
1:15	987.7	20.3	73	sw.	5.8	3,484	665.8	2.0	0.26	28	1.98	nw.	9.0	
						3,250	685.4	2.6		29	2.14	nw.	10.4	
						3,000	706.5	3.2		31	2.38	nw.	11.9	
						2,750	728.9	3.9		32	2.59	nw.	13.4	
						2,500	751.6	4.5		33	2.78	nw.	14.8	
1:30	987.6	20.4	72	ssw.	5.8	2,386	761.9	4.8	0.54	34	2.92	nw.	15.5	
						2,250	774.9	5.5		34	3.07	nw.	14.2	
						2,000	799.0	6.9		33	3.28	nw.	11.8	
						1,750	823.5	8.2		32	3.48	nw.	9.4	
1:43	987.6	20.2	73	sw.	7.2	1,550	843.3	9.3	0.20	32	3.75	nw.	7.5	
						1,500	848.9	9.4		38	4.48	nw.	8.0	
						1,250	874.8	9.9		64	7.81	nw.	10.6	
						1,000	901.4	10.4		90	11.35	nw.	13.2	
1:51	987.5	20.5	71	sw.	7.2	945	907.2	10.5	1.11	96	12.19	nw.	13.8	Altitude of Cu. base about 900 m.
						750	928.7	12.7		92	13.51	w.	10.7	
2:04	987.5	21.1	71	sw.	6.7	566	949.0	14.7	1.82	89	14.89	wsw.	7.9	
						500	956.4	15.9		86	15.54	wsw.	7.3	
						250	984.5	20.5		73	17.61	sw.	5.1	
2:15	987.4	20.9	72	sw.	4.9	225	987.4	20.9		72	17.80	sw.	4.9	2/10 Cu., wsw.
October 13, 1918.														
A. M.														
6:37	986.0	12.0	76	nw.	4.9	225	986.0	12.0		76	10.66	nw.	4.9	Smoky.
						250	983.0	12.0		74	10.38	nw.	5.4	
						500	954.6	12.6		56	8.17	nnw.	10.3	
6:55	986.3	12.0	74	nw.	4.0	721	929.6	13.0	−0.20	40	5.99	nnw.	14.7	
						750	926.4	12.9		40	5.95	nnw.	14.6	
						1,000	899.3	11.6		38	5.19	nnw.	14.1	
						1,250	872.8	10.3		36	4.51	nnw.	13.6	
7:11	986.6	12.4	72	wnw.	4.5	1,468	850.5	9.2	0.51	34	3.96	nnw.	13.2	
						1,500	847.0	9.1		34	3.93	nnw.	13.5	
						1,750	821.6	8.5		29	3.22	nnw.	16.0	
						2,000	797.5	7.8		25	2.64	nw.	18.5	
7:30	987.0	13.0	67	wnw.	4.8	2,251	773.7	7.2	0.26	21	2.13	nw.	21.0	
						2,500	750.2	5.9		21	1.95	nnw.	.....	
7:56	987.4	13.8	62	wnw.	5.4	2,380	742.9	5.5	0.26	21	1.90	nnw.	.....	
						2,500	750.2	5.5		21	1.90	nnw.	.....	
						2,250	773.4	5.5		21	1.90	nw.	.....	Dense smoke, wnw.
8:25	987.8	13.6	64	wnw.	5.4	2,032	793.7	5.5	0.20	21	1.90	nw.	.....	
						2,000	797.0	5.6		21	1.91	nw.	.....	
						1,750	821.6	6.1		25	2.36	nw.	.....	
						1,500	847.0	6.6		28	2.73	nw.	.....	
8:40	987.9	13.4	63	wnw.	5.4	1,392	858.2	6.8	0.34	29	2.87	nw.	.....	
						1,250	872.8	7.3		31	3.17	nw.	.....	
						1,000	899.3	8.1		36	3.89	wnw.	.....	
8:49	988.0	13.4	63	wnw.	4.5	746	928.2	9.0	0.33	40	4.59	wnw.	12.6	
						500	956.1	11.0		51	6.70	wnw.	9.2	
						250	985.5	13.1		63	9.50	wnw.	5.7	
8:58	988.1	13.3	64	wnw.	5.4	225	988.1	13.3		64	9.77	wnw.	5.4	Dense smoke, wnw.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 15, 1918, series (No. 1).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
7:35	998.4	9.0	78	S.	4.0	225	998.4	9.0	.....	78	8.95	S.	4.0	Cloudless.
						250	995.7	9.0	.....	76	8.72	S.	4.4	
						500	965.8	9.5	.....	57	6.77	SSW.	8.8	
7:40	998.4	9.4	76	S.	4.5	633	950.5	9.7	−0.17	46	5.53	SW.	11.2	
						750	937.4	10.4	.....	41	5.17	SW.	10.9	
						1,000	910.0	11.9	.....	31	4.32	WSW.	10.1	
8:05	998.3	10.5	74	S.	4.5	1,193	889.0	13.0	−0.59	23	3.45	WSW.	9.5	
						1,250	883.5	12.8	.....	25	3.70	WSW.	9.7	
						1,500	857.5	12.1	.....	33	4.66	WSW.	10.7	
						1,750	832.3	11.4	.....	41	5.53	W.	11.6	
8:25	998.3	11.5	71	S.	4.9	2,001	807.4	10.7	0.28	49	6.31	W.	12.6	
						2,250	783.4	9.0	.....	51	5.85	W.	13.2	
						2,500	760.0	7.3	.....	52	5.32	W.	13.7	
						2,750	737.5	5.6	.....	54	4.91	W.	14.3	
8:50	998.3	12.8	67	S.	5.4	2,917	722.5	4.5	0.68	55	4.63	W.	14.7	
						3,000	715.5	4.2	.....	52	4.29	W.	14.0	
						3,250	694.2	3.2	.....	44	3.38	WNW.	12.0	
9:36	998.3	14.9	55	SSW.	5.8	3,363	684.3	2.7	0.38	40	2.97	WNW.	11.0	1/10 Ci. St., w.; smoky.
						3,250	694.2	3.1	.....	42	3.20	WNW.	11.2	
						3,000	715.5	4.0	.....	47	3.82	WNW.	11.5	
						2,750	737.5	4.9	.....	52	4.50	W.	11.8	
						2,500	760.0	5.7	.....	57	5.22	W.	12.2	
10:05	998.2	16.0	52	SSW.	7.2	2,477	762.6	5.8	0.68	57	5.26	W.	12.2	
						2,250	783.4	7.4	.....	53	5.46	W.	11.7	
						2,000	807.6	9.1	.....	48	5.55	W.	11.2	
						1,750	832.3	10.8	.....	43	5.57	W.	10.6	
						1,500	857.5	12.5	.....	38	5.51	W.	10.1	
						1,250	883.5	14.2	.....	33	5.34	W.	9.5	
10:24	997.7	16.8	53	SSW.	6.7	1,198	889.0	14.5	−0.34	32	5.28	W.	9.4	
						1,000	910 0	13.8	.....	39	6.15	WSW.	9.1	
						750	937.4	13.0	.....	48	7.19	SW.	8.8	
10:37	997.4	17.0	51	SSW.	5.8	643	949.2	12.6	1.24	52	7.59	SW.	8.6	
						500	965 6	14.4	.....	51	8.36	SW.	7.8	
						250	994.4	17.5	.....	48	9.60	SSW.	6.4	
10:44	997.3	17.8	48	SSW.	6.3	225	997.3	17.8	.....	48	9.78	SSW.	6.3	Cloudless.

October 15, 1918, series (No. 2).

A. M.														
11:50	996.1	20.0	36	SSW.	7.2	225	996.1	20.0	.....	36	8.42	SSW.	7.2	Cloudless.
						250	993.5	19.7	.....	37	9.49	SSW.	7.3	
						500	964.9	16.9	.....	44	8.47	SSW.	8.6	
11:57	996.0	20.3	37	SSW.	7.6	702	941.8	14.5	1.15	50	8.26	SSW.	9.6	
						750	936.7	14.4	.....	50	8.20	SSW.	11.0	
P. M.														
12:05	995.8	20.5	39	SSW.	7.2	803	930.3	12.0	1.31	45	6.31	SW.	15.3	
12:07	995.7	20.5	39	SSW.	7.6	989	910.1	15.9	−4.02	38	6.87	SW.	15.0	
						1,000	909.0	15.9	.....	38	6.87	SW.	15.0	
						1,250	882.0	15.5	.....	45	7.92	SW.	15.4	
						1,500	856.4	15.1	.....	51	8.75	WSW.	15.7	
12:23	995.4	20.6	40	SSW.	7.2	1,578	848.7	15.0	0.15	53	9.04	WSW.	15.8	
						1,750	831.0	13.7	.....	52	8.15	WSW.	15.8	
						2,000	806.8	11.7	.....	51	7.01	WSW.	15.8	
						2,250	783.1	9.8	.....	50	6.06	W.	15.7	
						2,500	760.0	7.8	.....	49	5.18	W.	15.7	
12:54	994.7	21.1	37	SSW.	6.3	2,607	749.9	7.0	0.78	49	4.91	W.	15.7	
						2,750	737.7	6.4	.....	46	4.42	W.	16.3	
						3 000	715.6	5.2	.....	40	3.54	W.	17.3	
						3,250	694.0	4.1	.....	35	2.87	W.	18.4	
						3,500	672.8	3.0	.....	29	2.20	W.	19.4	
1:32	994.4	22.3	35	SSW.	3.6	3,535	669.9	2.8	0.58	28	2.09	W.	19.6	
						3,500	672.8	3.1	.....	29	2.21	W.	19.6	
						3,250	694.0	4.9	.....	35	3.03	W.	19.6	2/10 Cl.St., w.
						3 000	715.6	6.6	.....	41	4.00	W.	19.6	
1:55	994.2	21.9	42	SSW.	7.2	2,752	737.7	8.4	0.76	47	5.18	W.	19.6	
						2 500	760.0	10.3	.....	49	6.14	WSW.	18.9	
						2,250	783.1	12.2	.....	50	7.10	SW.	18.2	
2:07	994.1	21.9	44	SSW.	5.8	2,097	797.8	13.4	0.58	51	7.84	SW.	17.8	
						2,000	806.8	14.0	.....	51	8.15	SW.	18.1	
						1,750	831.0	15.4	.....	51	8.92	SW.	18.9	
						1,500	855.8	16.9	.....	51	9.82	SW.	19.7	
2:12	994.0	22.0	43	SSW.	7.6	1,388	867.4	17.5	−0.71	51	10.20	SW.	20.1	
						1,250	881.5	16.5	.....	50	9.38	SW.	17.0	
						1,000	908.0	14.7	.....	48	8.03	SW.	11.5	
2:17	993.9	22.0	43	SSW.	6.7	978	910.1	14.6	0.58	48	7.98	SW.	11.1	
						750	934.9	15.9	.....	47	8.49	SW.	11.2	
2:23	993.8	22.0	43	SSW.	7.2	686	941.8	16.3	1.11	47	8.71	SW.	11.2	
						500	962.5	18.4	.....	47	9.95	SW.	9.4	
						250	991.0	21.1	.....	46	11.51	SSW.	6.9	
2:28	993.7	21.4	46	SSW.	6.7	225	993.7	21.4	.....	46	11.73	SSW.	6.7	

October 15, 1918, series (No. 3).

P. M.														
3:28	993.1	21.4	36	SSW.	7.2	225	993.1	21.4	.....	36	9.18	SSW.	7.2	6/10 Cl. St., w.; 1/10 Cl.Cu., w.
						250	990.2	21.2	.....	36	9.06	SSW.	7.5	
						500	961.6	18.7	.....	36	7.77	SSW.	10.3	
3:33	993.0	21.4	36	SSW.	4.0	744	934.6	16.3	0.98	36	6.67	SSW.	13.0	
						750	934.0	16.3	.....	36	6.67	SSW.	13.1	
3:41	993.0	21.2	38	SSW.	7.2	942	913.1	15.4	0.45	40	7.00	SW.	14.8	
						1,000	907.0	15.8	.....	39	7.00	SW.	14.5	
3:43	993.0	21.1	38	SSW.	7.2	1,156	890.4	17.0	−0.74	36	6.98	WSW.	13.5	
						1,250	880.6	17.0	.....	37	7.17	WSW.	14.6	

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 15, 1918, series (No. 3)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
3:48	993.0	21.0	39	SSW.	8.0	1,387	866.6	16.9	0.04	38	7.32	W.	16.2	
						1,500	854.8	16.2		37	6.82	W.	16.1	
						1,750	829.7	14.6		36	5.98	W.	15.7	
						2,000	805.8	13.0		35	5.24	W.	15.4	
4:00	992.9	20.8	40	SW.	7.2	2,027	803.2	12.8	0.64	35	5.17	W.	15.4	
						2,250	782.1	11.4		37	4.99	W.	14.9	
						2,500	759.0	9.8		39	4.73	W.	14.3	
						2,750	736.5	8.2		42	4.57	W.	13.8	7/10 Cl.Cu., w.
4:52	992.9	19.1	43	SW.	5.4	2,989	715.0	6.7	−0.06	44	4.32	W.	13.2	
4:57	992.9	19.0	44	SSW.	6.3	2,936	719.8	6.3	0.68	45	4.30	W.	13.2	
						2,750	736.5	7.6		41	4.28	W.	13.8	
						2,500	759.0	9.3		36	4.22	W.	14.5	
						2,250	782.1	11.0		32	4.20	W.	15.3	3/10 Cl.St., nw.
						2,000	805.8	12.6		27	3.94	W.	16.1	
5:22	993.0	18.1	47	SSW.	4.9	1,960	809.4	12.9	0.60	26	3.87	W.	16.2	
						1,750	829.7	14.2		29	4.70	W.	15.9	
						1,500	854.8	15.7		32	5.71	W.	15.5	
						1,250	880.6	17.2		35	6.87	W.	15.2	
5:45	993.1	17.5	48	SSW.	5.4	1,144	891.7	17.8	−0.06	36	7.34	W.	15.0	
						1,000	907.0	17.7		34	6.89	W.	14.8	
5:55	993.2	17.3	49	SSW.	4.9	789	929.5	17.6	−1.55	30	6.04	W.	14.4	
						750	934.0	17.0		31	6.01	W.	14.9	
5:58	993.2	17.2	49	SSW.	4.9	673	942.2	15.8	0.27	34	6.10	W.	15.8	
						500	961.6	16.3		39	7.23	WSW.	11.4	
						250	990.2	16.9		47	9.05	SSW.	5.1	
6:08	993.2	17.0	48	SSW.	4.5	225	993.2	17.0		48	9.30	SSW.	4.5	2/10 Cl.St., nw.

October 15, 1918, series (No. 4).

P. M.														
6:41	993.5	16.4	51	SSW.	4.0	225	993.5	16.4		51	9.51	SSW.	4.0	2/10 Cl.St., nw.
						250	990.4	16.5		50	9.38	SSW.	5.1	
						500	961.8	17.9		40	8.20	SSW.	16.5	
6:50	993.6	16.1	53	SSW.	4.5	597	951.1	18.4	−0.54	36	7.62	SSW.	21.0	
						750	934.0	17.7		37	7.49	SSW.	27.2	4/10 A.Cu., nw.
						1,000	907.5	16.6		38	7.18	SW.	37.5	
7:03	993.6	16.0	54	SSW.	4.5	1,028	904.3	16.5	0.44	38	7.13	SW.	38.7	
						1,250	881.0	15.2		37	6.39	SW.	35.7	
						1,500	855.4	13.7		36	5.64	SW.	32.4	
						1,750	830.3	12.2		35	4.97	WSW.	29.0	
						2,000	805.8	10.7		34	4.38	WSW.	25.6	
						2,250	782.1	9.2		33	3.84	WSW.	22.2	
7:20	993.6	16.0	54	SSW.	5.4	2,315	774.8	8.7	0.60	33	3.71	WSW.	21.2	
						2,500	758.8	7.4		39	4.02	WSW.	24.5	
						2,750	736.2	5.5		47	4.24	W.	29.2	
						3,000	714.1	3.6		56	4.43	W.	33.9	
7:44	993.6	15.8	54	WSW.	4.0	*3,070	707.6	3.1	0.75	58	4.43	W.	35.3	3/10 Cl., r nw.

October 15, 1918, series (No. 5).

P. M.														
10:14	994.2	12.8	63	SW.	2.2	225	994.2	12.8		63	9.31	SW.	2.2	2/10 Cl., nw.
10:18	994.2	12.7	64	SW.	2.2	250	991.4	13.4		60	9.22	SW.	3.4	Brilliant aurora from 9:12 to 9:33 p. m.
						491	963.5	19.2	−2.41	29	6.45	W.	16.0	
						500	963.0	19.2		29	6.45	W.	16.1	
						750	934.7	20.0		32	7.48	W.	21.4	
10:36	994.2	12.4	64	SW.	5.8	755	934.3	20.0	−0.30	32	7.48	W.	21.5	
						1,000	908.0	18.7		35	7.55	W.	19.2	
						1,250	882.3	17.3		39	7.70	W.	16.9	
						1,500	857.5	15.9		42	7.59	W.	14.6	
10:56	994.2	12.6	65	SW.	3.1	1,715	835.1	14.7	0.55	45	7.53	W.	12.6	
						1,750	832.0	14.4		45	7.38	W.	13.0	
						2,000	807.2	12.6		47	6.86	W.	15.8	
						2,250	783.3	10.7		49	6.31	W.	18.6	
11:16	994.2	12.5	64	SW.	3.1	2,440	765.8	9.2	0.76	51	5.94	W.	20.8	
						2,500	760.4	8.8		51	5.78	W.	20.8	
						2,750	737.8	7.0		54	5.41	W.	21.1	
11:38	994.2	12.4	65	SW.	1.8	2,911	723.1	5.7	0.71	55	5.04	W.	21.2	
						3,000	715.7	5.1		54	4.75	W.	20.7	
						3,250	694.0	3.5		50	3.92	W.	19.2	
						3,500	673.0	1.9		46	3.22	W.	17.7	
A. M.														
12:28	994.2	12.6	61	SW.	7.6	3,740	653.2	0.3	0.66	42	2.62	W.	16.1	
						3,500	673.0	1.9		45	3.15	W.	16.3	
						3,250	694.0	3.5		47	3.69	W.	16.5	Aurora from 12:44 a. m. continued at end of flight.
						3,000	715.7	5.2		50	4.42	W.	16.8	
						2,750	737.8	6.8		53	5.24	W.	17.0	
12:51	994.2	12.8	60	SW.	1.8	2,723	740.1	7.0	0.70	53	5.31	W.	17.0	Cloudless.
						2,500	760.4	8.6		53	5.92	W.	15.6	
						2,250	783.3	10.3		53	6.64	W.	14.1	
						2,000	807.2	12.1		53	7.48	W.	12.6	
						1,750	832.0	13.9		53	7.48	W.	11.1	
1:13	994.2	12.8	59	SW.	7.6	1,743	832.6	13.9	0.80	53	8.42	W.	11.1	
						1,500	857.5	15.9		48	8.67	W.	12.3	
						1,250	883.0	17.9		44	9.02	W.	13.6	
						1,000	909.0	19.9		39	9.06	W.	14.8	
1:33	994.2	12.5	59	SW.	8.0	960	912.7	20.2	−0.10	38	9.00	W.	15.0	
						750	935.4	20.0		32	7.48	WSW.	17.7	
						500	963.0	19.7		26	5.97	SW.	20.9	
1:48	994.2	12.5	59	SW.	7.6	468	966.1	19.7	−2.92	25	5.74	SW.	21.3	
						250	991.4	13.3		56	8.55	SW.	8.9	
1:52	994.2	12.6	59	SW.	7.6	225	994.2	12.6		59	8.61	SW.	7.6	Cloudless.

*Instrument stopped recording; cylinder loose.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 16, 1918, series (No. 6).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
2:42	994.2	12.3	58	sw.	4.0	225	994.2	12.3	.....	58	8.30	sw.	4.0	Cloudless.
						250	992.3	12.8	.....	56	8.28	sw.	5.2	Aurora continued from previous flight ended at 4:30 a. m.
						500	963.0	18.0	.....	30	6.19	wsw.	17.2	
2:52	994.2	12.3	58	sw.	4.5	561	955.6	19.3	−2.08	23	5.15	wsw.	20.2	
						750	934.8	18.4	.....	27	5.71	wsw.	18.8	
						1,000	907.8	17.3	.....	33	6.52	w.	17.7	
						1,250	881.9	16.1	.....	39	7.14	w.	18.1	
3:12	994.2	12.4	57	sw.	4.5	1,376	858.6	15.5	0.47	42	7.40	w.	14.2	
						1,500	855.8	14.9	.....	41	6.95	w.	14.5	
						1,750	830.0	13.6	.....	38	5.92	w.	15.0	
						2,000	805.5	12.4	.....	35	5.04	w.	15.6	
						2,250	782.0	11.2	.....	32	4.26	w.	16.2	
						2,500	759.6	9.9	.....	28	3.42	w.	16.7	
3:55	994.2	12.4	57	sw.	4.9	2,539	756.0	9.7	0.50	28	3.37	w.	16.8	
						2,750	737.6	7.7	.....	31	3.26	w.	16.3	
						3,000	715.9	5.3	.....	35	3.12	w.	15.8	
						3,250	694.2	2.9	.....	38	2.86	w	15.2	
4:51	994.2	12.4	58	sw.	5.4	3,384	682.1	1.6	0.99	40	2.74	w.	14.9	
						3,250	694.2	3.0	.....	37	2.80	w.	14.9	
						3,000	715.9	5.6	.....	31	2.82	w.	15.0	
5:15	994.3	12.2	61	sw.	4.9	2,750	737.8	8.2	.....	26	2.83	w.	15.0	Few Cl., w.
						2,627	748.7	9.4	0.50	23	2.71	w.	15.0	
						2,500	760.8	10.0	.....	25	3.07	w.	15.4	
						2,250	784.0	11.3	.....	30	4.02	wsw.	16.3	
						2,000	808.0	12.5	.....	34	4.93	wsw.	17.1	
						1,750	832.0	13.8	.....	39	6.15	sw.	18.0	
6:00	994.6	11.8	68	sw.	4.5	1,743	832.5	13.8	0.58	39	6.15	sw.	18.0	
						1,500	857.0	15.2	.....	40	6.91	sw.	16.7	1/10 Cl., w.
						1,250	882.1	16.7	.....	41	7.79	sw.	15.3	
						1,000	908.0	18.1	.....	42	8.72	sw.	13.9	
6:24	994.7	11.4	63	sw.	3.6	929	916.3	18.5	0.12	42	8.95	sw.	13.5	
						750	935.4	18.7	.....	41	8.84	sw.	13.3	
						500	963.2	19.0	.....	38	8.35	sw.	12.9	
6:35	994.8	11.4	63	sw.	3.6	332	982.5	19.2	−7.29	37	8.23	sw.	12.7	
						250	992.3	13.2	.....	58	8.80	sw.	5.7	
6:38	994.8	11.4	65	sw.	3.6	225	994.8	11.4	.....	65	8.76	sw.	3.6	Few Cl., w.

October 16, 1918, series (No. 7).

A. M.														
6:47	994.8	11.5	64	sw.	3.1	225	994.8	11.5	.....	64	8.68	sw.	3.1	1/10 Cl., w.
						250	992.2	11.7	.....	64	8.80	sw.	3.5	
						500	963.2	13.4	.....	59	9.07	sw.	7.4	
6:54	994.9	11.8	66	sw.	3.6	725	937.5	14.9	−0.68	55	9.32	sw.	11.0	
						750	935.0	15.0	.....	54	9.21	sw.	11.0	
						1,000	908.0	15.7	.....	49	8.74	sw.	10.9	
7:07	994.9	12.2	66	sw.	3.1	1,045	902.8	15.8	−0.28	48	8.62	sw.	10.9	
						1,250	881.8	15.3	.....	47	8.17	wsw.	12.7	
						1,500	856.0	14.7	.....	45	7.53	w.	14.9	
7:15	994.9	12.4	66	sw.	3.1	1,558	849.7	14.5	0.25	45	7.43	w.	15.4	
						1,750	830.7	13.0	.....	48	7.19	w.	15.2	
						2,000	806.3	11.7	.....	51	7.01	w.	15.1	
7:27	994.9	12.9	63	sw.	3.6	2,225	784.6	9.1	0.31	56	6.47	w.	14.8	
						2,250	782.5	9.0	.....	55	6.31	w.	14.8	
						2,500	759.0	7.7	.....	50	5.26	w.	15.1	
8:00	994.9	14.6	58	sw.	4.5	2,750	736.2	6.5	.....	44	4.26	wnw.	15.3	
						2,989	715.1	5.3	0.50	39	3.47	wnw.	15.3	
						3,000	709.0	5.2	.....	39	3.45	wnw.	15.4	
						3,250	692.7	3.6	.....	42	3.32	wnw.	13.8	
						3,500	671.5	2.0	.....	44	3.11	wnw.	12.1	
8:58	994.9	17.2	54	sw.	4.0	3,570	665.5	1.5	0.49	45	3.06	wnw.	11.6	
						3,500	671.3	1.7	.....	45	3.11	wnw.	12.0	
						3,250	692.3	2.9	.....	42	3.16	wnw.	13.7	
						3,000	708.5	3.4	.....	41	3.20	wnw.	14.5	
9:19	994.8	18.2	50	wsw.	4.0	2,801	730.8	4.0	0.42	40	3.25	wnw.	15.5	
						2,750	735.2	4.2	.....	42	3.47	wnw.	15.1	1/10 Cl., w.
						2,500	758.0	5.3	.....	50	4.46	wnw.	13.0	
9:35	994.7	18.5	50	w.	4.0	2,393	768.4	5.7	0.75	53	4.85	wnw.	12.2	
						2,250	781.5	6.8	.....	51	5.04	wnw.	12.3	
						2,000	805.7	8.6	.....	49	5.47	w.	12.4	
9:50	994.6	19.0	51	w.	4.0	1,776	828.3	10.3	0.89	46	5.76	w.	12.5	
						1,750	830.7	10.5	.....	46	5.84	w.	12.6	
						1,500	856.0	12.8	.....	45	6.65	w.	13.8	
						1,250	881.8	15.0	.....	45	7.67	w.	15.0	
						1,000	908.0	17.2	.....	44	8.63	w.	16.1	
10:00	994.6	19.0	51	w.	3.6	963	912.1	17.5	−1.06	44	8.80	w.	16.3	
						750	935.0	14.6	.....	49	8.14	w.	17.4	
10:10	994.6	19.4	50	w.	1.8	680	942.9	14.5	1.12	51	8.42	w.	17.7	
						500	962.9	16.5	.....	51	9.57	w.	12.1	
						250	991.8	19.3	.....	50	11.20	w.	4.3	
10:17	994.6	19.6	50	w.	3.6	225	994.6	19.6	.....	50	11.40	w.	3.6	10/10 Cl., w.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 17, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
7:53	990.2	13.8	78	sw.	3.1	225	986.2	13.8		78	12.31	sw.	3.1	6/10 Cl.St., w.
						250	987.0	13.8				sw.	3.7	
						500	958.4	14.3				sw.	9.8	
7:54	990.2	13.8	78	sw.	3.1	557	952.0	14.4	−0.18			sw.	11.2	
						750	930.5	15.2				wsw.	10.6	
						1,000	903.5	16.3				w.	9.8	
8:10	990.2	14.8	76	sw.	3.6	1,065	896.8	16.6	−0.43			w.	9.6	
						1,250	877.4	15.8				w.	9.0	
						1,500	851.7	14.6				w.	8.2	Partial solar halo at 8:27 a. m.
						1,750	827.0	13.4				w.	7.4	
8:45	990.2	16.1	77	sw.	6.7	1,866	815.8	12.8	0.46			w.	7.0	
						2,000	802.5	11.9				w.	7.0	
						2,250	778.9	10.3				w.	7.0	
						2,500	756.0	8.7				wnw.	7.0	
9:09	990.1	16.5	67	sw.	8.5	2,659	741.4	7.6	0.66			wnw.	7.0	
						2,750	733.3	7.1				wnw.	7.2	
						3,000	711.0	5.9				wnw.	7.9	
						3,250	689.5	4.6				wnw.	8.5	
						3,500	668.5	3.5				wnw.	9.1	
						3,750	648.3	2.1				wnw.	9.8	
10:02	989.8	18.2	74	sw.	5.4	3,840	641.5	1.6	0.51			wnw.	10.0	
						4,000	628.0	0.5				wnw.	10.9	
						4,250	608.5	−1.3				wnw.	12.3	
10:55	988.9	20.1	74	sw.	4.5	4,383	598.2	−2.3	0.49			wnw.	13.0	
						4,250	608.5	−1.9				wnw.	12.4	7/10 Cl.St., w.; 1/10 Cl.Cu., w.
						4,000	628.0	−1.3				wnw.	11.2	
						3,750	647.6	−0.7				nw.	10.0	
						3,500	667.5	0.0				nw.	8.8	
11:30	988.3	22.2	67	wsw.	4.9	3,342	680.1	0.4	0.35			nw.	8.1	
						3,250	688.3	0.7				nw.	8.6	
						3,000	709.3	1.6				nw.	9.8	
						2,750	731.5	2.5				nw.	11.0	
11:50	988.0	22.6	58	wsw.	4.9	2,736	732.9	2.5	1.08			nw.	11.1	
						2,500	754.3	5.1				nw.	10 5	
						2,250	777.4	7 8				nw.	9.8	
						2,000	801.3	10.5				nw.	9.2	
						1 750	825.6	13.2				nw.	8.5	
11:54	987.9	23.2	60	wsw.	4.9	1,698	830 9	13.7	0.18			nw.	8.4	
						1,500	850.7	14.1				nw.		
						1,250	876.4	14.5				wnw.		
P. M.														
12:17	987.7	23.7	52	wsw.	6.7	1,041	898.1	14.9	0.83			wnw.		
						1,000	902.3	15.3				wnw.		
						750	929.0	17.3				w.		
12:36	987.6	23.7	50	wsw.	6.3	679	937.0	17.9	1.43			w.		
						500	956.4	20.5				w.		
						250	984.7	24.1				wsw.		
12:50	987.6	24.4	47	wsw.	8.5	225	987.6	24.4		47	14.37	wsw.	8.5	8/10 Cl.St., w.

October 18, 1918.

A. M.														
7:38	996.6	9.0	78	e.	9.4	225	996.6	9.0		78	9.87	e.	9.4	10/10 St.Cu., ne.
						250	993.5	8.8				e.	9.5	
						500	963.7	6.1				e.	11.1	
7:41				e.	9.8	684	942.4	4.2	1.05			e.	12.3	
						750	934.9	4.5				e.	11.7	Altitude of St.Cu. base about 1,050 m.
						1,000	906.5	5.7				e.	9.4	
8:09	996.7	9.0	88	e.	10.3	1,220	882.7	6.7	−0.47			e.	7.3	
						1,250	879.2	6.8				e.	7.1	
						1.500	853.5	7.8				e.	5.7	
						1,750	828.7	8.7				ese.	4.2	
9:21	997.4	10.2	84	e.	8.9	1,795	824.0	8.9	−0.38			ese.	3.9	
						2,000	804.0	8.7				ese.	2.8	3/10 Cl., w.; 4/10 St.Cu., ne.
9:51	997.6	11.2	82	e.	9.8	2,233	781.5	8.5	−0.07			ese.	1.6	
						2,000	804.0	8.0				ese.	3.3	
10:14	997.6	11.9	76	e.	10.3	1,797	824.0	7.5	−0.23			ese.	4.7	
						1,750	828.7	7.4				ese.	4.9	
						1,500	854.0	6.8				ese.	6.0	
						1,250	880.3	6.3				ese.	7.0	
						1,000	907.6	5.7				ese.	8.1	
						750	936.3	5.1				ese.	9.2	
10:37	997.6	12.1	80	e.	11.6	695	942.4	5.0	1.70			ese.	9.4	
						500	965.2	8.4				ese.	9.4	
						250	994.5	12.6				e.	9.4	
11:02	997.6	13.0	75	e.	9.4	225	997.6	13.0		75	11.24	e.	9.4	3/10 Cl., w.

October 19, 1918.

A. M.														
7:40	997.0	6.0	87	e.	8.0	225	997.0	6.0		87	8.13	e.	8.0	Cloudless; light smoke during flight.
						250	994.0	6.2		87	8.25	e.	8.2	
						500	964.6	8.7		83	9.34	se.	10.7	
						750	935.7	11.1		79	10.44	sse.	13.2	
7:50	997.0	6.4	86	se.	5.8	756	938.0	11.2	−0.98	79	10.51	sse.	13.3	
						1,000	908.0	11.3		74	9.91	sse.	10.3	
						1,250	881.2	11.3		69	9.24	sse.	7.1	
8:30	996.6	7.8	80	ese.	6.7	1,442	861.3	11.4	−0.03	65	8.76	sse.	4.7	
						1,500	855.1	11.4		71	9.57	sse.	6.7	7/10 Cl.St., sw.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 19, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:10	995.2	11.3	80	se.	5.4	1,003	844.6	11.4	0.00	81	10.92	s.	10.4	
						1,750	829.1	10.8		78	10.10	s.	9.9	
						2,000	804.2	9.9		73	8.91	s.	9.0	
						2,250	780.3	8.9		68	7.75	s.	8.1	
						2,500	757.1	8.0		63	6.76	s.	7.2	
10:16	995.1	11.8	77	se.	2.7	2,748	735.4	7.0	0.30	58	5.81	s.	6.3	
						2,500	757.1	7.6		39	4.07	s.	10.6	
10:36	995.0	12.7	70	se.	6.7	2,408	765.9	7.8	0.35	32	3.39	s.	12.1	
						2,250	780.3	8.4		36	3.97	s.	11.7	
						2,000	804.2	9.3		43	5.04	s.	11.1	
						1,750	829.0	10.2		49	6.10	s.	10.4	
						1,500	854.5	11.1		56	7.40	s.	9.8	
10:49	995.0	13.1	68	se.	5.4	1,348	870.3	11.6	0.52	60	8.20	s.	9.4	
						1,250	880.5	12.1		62	8.75	s.	10.3	
						1,000	907.0	13.4		67	10.30	s.	12.6	
						750	934.5	14.7		72	12.05	s.	15.0	
10:58	994.9	14.0	66	se.	4.9	734	936.4	14.8	−1.71	72	12.12	s.	15.1	
11:02	994.9	14.0	67	se.	4.9	576	954.1	12.1	0.54	74	10.45	s.	9.5	
						500	963.0	12.5		73	10.58	s.	8.5	
						250	992.1	13.9		70	11.12	se.	5.2	
11:06	994.8	14.0	70	se.	4.9	225	994.8	14.0		70	11.19	se.	4.9	3/10 Cl.St., sw.

October 20, 1918.

P. M.														
1:01	989.8	17.0	73	wnw.	6.3	225	989.8	17.0		73	14.15	wnw.	6.3	Cloudless.
						250	986.7	16.7		73	13.88	wnw.	6.2	
						500	958.2	14.0		74	11.53	wnw.	5.4	
1:11	989.8	17.1	81	wnw.	5.8	570	950.3	13.2	1.10	74	11.23	wnw.	5.2	
						750	930.2	12.2		68	9.66	wnw.	6.7	
						1,000	902.8	10.8		59	7.64	nw.	8.8	
1:38	989.8	18.0	77	wnw.	6.3	1,241	877.0	9.5	0.55	51	6.05	nw.	10.8	
						1,250	876.2	9.4		51	6.01	nw.	10.9	
						1,500	849.9	7.6		48	5.01	nw.	13.6	
						1,750	824.3	5.7		46	4.21	nw.	16.3	
						2,000	799.6	3.8		43	3.45	nw.	19.0	
1:57	989.8	18.0	73	wnw.	6.3	2,206	779.6	2.2	0.76	41	2.94	nw.	21.2	
						2,250	775.2	2.1		40	2.84	nw.	20.7	
						2,500	751.2	1.3		37	2.48	nw.	17.7	
2:08	989.8	17.8	78	wnw.	5.8	2,680	734.3	0.8	0.52	35	2.26	nw.	15.5	
						2,500	751.2	0.9		34	2.32	nw.	15.4	
						2,250	774.8	1.1		33	2.18	nw.	15.2	
2:25	989.8	18.4	72	wnw.	6.7	2,013	797.1	1.3	0.53	32	2.15	nw.	15.0	
						2,000	798.8	1.4		33	2.23	nw.	14.9	
						1,750	823.6	2.7		44	3.26	nw.	12.8	
						1,500	849.2	4.0		56	5.25	nw.	10.8	
						1,250	875.8	5.4		67	6.01	nw.	8.8	
2:43	989.8	18.8	69	wnw.	7.6	1,167	884.8	5.8	1.29	71	6.55	nw.	8.1	
						1,000	902.8	8.0		67	7.19	nw.	8.6	
						750	930.2	11.2		61	8.11	wnw.	9.3	
2:53	989.8	19.0	70	wnw.	7.6	595	947.6	13.2	1.51	58	8.80	wnw.	9.7	
						500	958.2	14.7		60	10.04	wnw.	8.2	
						250	986.7	18.5		66	14.06	wnw.	4.4	
3:02	989.8	18.8	67	wnw.	4.0	225	989.8	18.8		67	14.54	wnw.	4.0	Cloudless.

October 22, 1918.

A. M.														
7:39	993.2	7.7	78	sse.	4.0	225	993.2	7.7		78	8.20	sse.	4.0	7/10 Cl.St., w.
						250	990.0	7.8		77	8.15	sse.	4.4	
						500	960.6	8.6		64	7.15	sse.	9.0	
7:45	993.2	7.8	76	sse.	4.0	647	943.8	9.1	−0.33	57	6.59	sse.	11.8	
						750	931.8	8.7		57	6.41	sse.	10.9	
						1,000	904.3	7.8		56	5.92	sse.	8.7	
8:18	993.1	9.5	76	sse.	4.5	1,205	882.5	7.1	0.36	56	5.65	sse.	6.9	
						1,250	877.7	7.3		54	5.52	sse.	6.8	
						1,500	851.5	8.4		42	4.63	s.	6.0	
9:05	992.9	11.4	71	sse.	6.3	1,650	836.2	9.1	−0.45	35	4.05	ssw.	5.6	
						1,750	826.0	8.9		35	3.99	ssw.	5.6	
						2,000	801.8	8.5		35	3.89	ssw.	5.6	5/10 Cl.St., w.; 2/10 A.St., w.
						2,250	777.9	8.1		35	3.78	ssw.	5.6	
10:30	993.2	13.9	69	sse.	4.0	2,392	765.0	7.9	0.11	35	3.73	ssw.	5.6	
						2,250	777.9	8.0		35	3.76	ssw.	5.4	
						2,000	801.7	8.2		35	3.80	ssw.	5.1	
						1,750	826.5	8.3		35	3.83	s.	4.8	
						1,500	852.3	8.5		35	3.88	s.	4.4	
10:55	993.4	14.6	65	sse.	4.9	1,481	854.0	8.5	0.03	35	3.88	s.	4.4	
						1,250	878.9	8.6		36	4.02	sse.	5.1	
						1,000	905.7	8.7		37	4.16	se.	5.9	
11:15	993.2	14.6	66	sse.	5.4	846	922.1	8.7	0.07	37	4.16	se.	6.4	
						750	933.3	9.6		41	4.90	se.	6.0	
						500	961.6	12.1		53	7.48	sse.	5.1	
						250	990.2	14.5		64	10.57	sse.	4.1	
11:26	993.1	14.7	65	sse.	4.0	225	993.1	14.7		65	10.87	sse.	4.0	2/10 Cl.St., w.; 6/10 A.St., w.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 26, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:33	993.2	12.0	93	e.	7.6	225	993.2	12.0	.....	93	13.05	e.	7.6	10/10 St., ne.
						250	990.4	11.8	.....	93	12.87	e.	7.4	
						500	961.3	10.3	.....	97	12.15	e.	5.9	Altitude of St. base about 400 m.
7:40	993.2	12.0	93	e.	6.7	524	958.2	10.2	0.60	97	12.08	e.	5.8	
7:44	993.2	12.0	93	e.	7.6	604	949.2	12.0	−2.25	96	13.47	e.	7.5	
						750	933.0	11.2	.....	94	12.50	e.	6.8	
						1,000	905.5	9.9	.....	92	11.22	e.	5.7	
9:01	993.5	12.1	92	e.	4.9	1,086	896.1	9.4	0.54	91	10.73	e.	5.3	
						1,250	878.7	8.8	.....	91	10.31	e.	5.3	
						1,500	852.7	8.3	.....	91	9.96	e.	5.4	
						1,750	827.2	7.1	.....	92	9.28	e.	5.5	
9:12	993.5	12.3	91	e.	5.8	1,802	816.1	6.7	0.78	92	9.03	e.	5.5	
						1,750	827.2	8.1	.....	91	9.83	e.	5.8	
9:17	993.5	12.4	91	e.	6.7	1,531	849.7	10.7	−2.00	89	11.45	e.	6.5	
						1,500	852.7	10.1	.....	88	10.88	e.	6.1	
9:19	993.5	12.4	91	e.	3.1	1,446	858.4	9.0	0.65	87	9.99	e.	5.5	
						1,250	878.7	10.3	.....	90	11.28	e.	4.9	
						1,000	905.5	11.9	.....	93	12.95	e.	4.2	
9:31	994.5	12.4	93	e.	5.4	937	912.5	12.3	−1.01	94	13.45	e.	4.0	
						750	933.0	10.5	.....	94	11.94	e.	6.9	
9:37	993.5	12.4	93	e.	4.9	719	936.5	10.1	0.51	94	11.62	e.	7.6	
						500	961.3	11.2	.....	93	12.37	e.	6.6	
						250	990.8	12.5	.....	92	13.33	e.	5.5	
9:40	993.5	12.6	92	e.	5.4	225	993.5	12.6	.....	92	13.42	e.	5.4	10/10 St., ne.

October 27, 1918.

P. M.														
1:21	976.1	22.2	82	sse.	11.6	225	976.1	22.2	.....	82	21.95	sse.	11.6	3/10 A.Cu., sw.; 6/10 St., se.
						250	973.7	22.0	.....	82	21.68	sse.	12.1	
						500	945.7	20.1	.....	81	19.06	s.	16.7	
1:27	976.0	22.2	81	sse.	13.0	676	926.5	18.8	0.75	80	17.36	s.	19.8	
						750	918.5	18.2	.....	82	17.14	s.	21.0	
						1,000	891.9	16.1	.....	88	16.10	s.	24.8	
						1,250	865.9	14.0	.....	94	15.02	s.	28.7	Altitude of St.Cu. base about 1,150 m.
1:47	975.6	22.2	79	sse.	12.5	1,300	860.7	13.6	0.83	95	14.80	s.	29.5	
2:07	975.2	22.2	80	sse.	12.5	1,500	840.0	12.7	.....	94	13.81	ssw.	32.3	7/10 A.Cu., sw.; few Cu., nsw.; 2/10 St., sse.
						1,669	823.2	11.9	0.40	94	13.09	ssw.	34.7	
						1,500	840.0	12.5	.....	95	13.77	ssw.	32.2	
						1,250	865.0	13.2	.....	96	14.66	ssw.	28.4	
2:20	974.9	22.9	74	sse.	12.1	*1,158	874.6	13.6	.....	96	14.96	ssw.	27.0	

October 28, 1918.

A. M.														
9:10	979.1	9.0	83	sw.	7.6	225	979.1	9.0	.....	83	9.53	sw.	7.6	10/10 St.Cu., sw.
						250	976.0	8.9	.....	84	9.58	sw.	8.1	Altitude of St.Cu. base about 900 m.
						500	947.0	7.4	.....	95	9.78	sw.	13.4	
9:15	979.2	9.0	83	sw.	7.6	573	938.8	7.0	0.57	96	9.82	sw.	14.9	
						750	918.5	5.8	.....	98	9.04	sw.	16.1	
						1,000	890.8	4.1	.....	99	8.11	sw.	17.8	
						1,250	864.2	2.4	.....	100	7.26	sw.	19.5	
9:33	979.4	9.2	83	sw.	6.7	1,406	847.6	1.4	0.67	100	6.76	sw.	20.6	
						1,500	837.9	1.3	.....	100	6.71	sw.	19.6	
						1,750	812.4	1.0	.....	100	6.57	sw.	17.0	
9:49	979.6	9.5	82	sw.	8.0	†1,822	805.1	0.9	0.12	100	6.52	sw.	16.2	10/10 St.Cu., sw.

October 29, 1918.

A. M.														
7:40	980.0	8.8	86	sse.	4.9	225	980.0	8.8	.....	86	9.74	sse.	4.9	3/10 Cl.St., sw.
						250	977.7	8.9	.....	83	9.46	sse.	5.5	
						500	948.4	9.5	.....	58	6.88	ssw.	11.4	
7:47	980.0	9.0	86	sse.	4.9	646	931.4	9.9	−0.26	40	4.88	sw.	14.8	
						750	920.0	9.6	.....	33	3.94	sw.	14.4	
7:55	980.0	9.6	83	s.	5.4	970	895.9	8.9	0.31	18	2.05	sw.	13.4	
						1,000	892.8	8.6	.....	22	2.46	sw.	12.7	
8:35	979.8	11.0	78	sse.	5.4	1,192	872.0	7.0	0.86	50	5.01	sw.	8.2	
						1,250	866.2	6.7	.....	51	5.00	sw.	8.8	
						1,500	840.3	5.5	.....	55	4.97	sw.	11.3	
						1,750	814.8	4.3	.....	59	4.90	sw.	14.0	
						2,000	789.9	3.2	.....	63	4.84	sw.	16.5	
						2,250	766.2	2.0	.....	66	4.66	sw.	19.1	
8:42	979.8	11.3	76	sse.	5.4	2,285	762.6	1.8	0.48	67	4.66	sw.	19.5	
						2,500	742.7	1.3	.....	63	4.23	sw.	20.0	6/10 Cl.St., sw.
						2,750	720.0	0.7	.....	57	3.67	sw.	20.6	
9:28	979.8	12.9	71	s.	4.5	2,919	705.1	0.3	0.27	54	3.37	sw.	21.0	
						2,750	720.0	0.8	.....	58	3.75	sw.	20.9	
						2,500	742.7	1.5	.....	65	4.43	sw.	20.7	
9:54	980.0	14.0	70	s.	5.8	2,279	763.8	2.2	0.46	71	5.08	sw.	20.5	
						2,250	766.2	2.3	.....	71	5.12	sw.	20.3	
						2,000	790.8	3.5	.....	70	5.50	sw.	19.0	
						1,750	815.9	4.7	.....	69	5.89	ssw.	17.7	

* Kites broke away at 2:44 p. m.

† Kite collapsed.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, October, 1918*—Continued.

October 29, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:32	980.0	15.1	63	s.	5.4	1,610	829.4	5.3	0.50	68	6.06	ssw.	17.0	
						1,500	841.0	5.8		69	6.36	ssw.	16.1	
						1,250	866.5	7.1		71	7.16	ssw.	14.1	
						1,000	892.8	8.3		73	7.99	s.	12.1	
						750	920.0	9.6		75	8.96	s.	10.1	
10:53	980.0	15.2	69	s.	5.4	686	927.6	9.9	1.19	76	9.27	s.	9.6	
						500	948.4	12.1		72	10.17	s.	8.8	
						250	977.7	15.1		67	11.50	s.	7.7	
10:58	980.0	15.4	67	s.	7.6	225	980.0	15.4		67	11.72	s.	7.6	1/10 Cl.Cu., sw.; 7/10 St.Cu., sw.

October 30, 1918.

P. M.														
3:13	982.5	12.8	66	wnw.	4.0	225	982.5	12.8		66	9.75	wnw.	4.0	2/10 Cl.Cu., nw.; 2/10 Cu., nw.
						250	980.0	12.5		65	9.42	wnw.	4.2	
						500	950.7	9.6		53	6.33	wnw.	6.2	
3:19	982.6	12.6	61	wnw.	4.9	570	942.7	8.8	1.16	50	5.66	wnw.	6.7	
						750	922.3	7.1		57	5.75	wnw.	7.0	
						1,000	895.5	4.8		67	5.76	wnw.	7.5	
3:56	983.0	11.5	67	wnw.	6.7	1,071	887.1	4.1	0.94	70	5.73	wnw.	7.6	
						1,250	868.5	2.7		67	4.97	wnw.	6.7	
						1,500	841.2	0.7		64	4.12	wnw.	5.4	
4:58	983.4	8.6	82	nw.	4.0	1,668	823.4	−0.7	0.80	61	3.51	wnw.	4.5	
						1,750	814.6	−1.1		59	3.29	wnw.	5.6	3/10 Cl.St., nw.
						2,000	789.5	−2.3		53	2.67	wnw.	9.0	
5:12	983.6	8.3	83	nw.	3.6	2,197	770.2	−3.2	0.47	48	2.25	wnw.	11.7	
						2,250	765.0	−3.4		52	2.39	wnw.	11.4	
						2,500	741.3	−4.5		59	2.89	wnw.	10.0	
5:30	983.9	8.1	85	nw.	3.6	2,745	718.9	−5.5	0.42	60	3.30	wnw.	8.7	
						3,000	696.6	−7.0		60	2.91	nw.	9.0	
5:53	984.3	7.8	79	nw.	3.6	3,128	685.0	−7.7	0.58	56	2.73	nw.	9.1	
						3,000	691.5	−6.9		56	2.93	nw.	9.2	
						2,750	718.5	−5.5		57	3.34	nw.	9.3	
						2,500	741.3	−4.0		57	3.80	nw.	9.4	
						2,250	765.7	−2.5		58	4.36	nw.	9.5	
6:14	984.5	6.9	86	nw.	3.1	2,191	771.4	−2.2	−0.24	58	4.48	nw.	9.5	
						2,000	790.6	−2.7		94	4.59	nw.	9.5	
6:18	984.5	6.8	86	nw.	3.1	1,817	808.5	−3.1	0.69	100	4.71	nw.	9.5	
						1,750	815.8	−2.6		100	4.92	nw.	9.5	
						1,500	841.8	−0.9		98	5.56	nw.	9.6	
						1,250	868.5	0.8		97	6.28	nw.	9.7	
6:30	984.6	7.0	87	nw.	3.6	1,204	873.2	1.1	0.80	97	6.42	nw.	9.7	
						1,000	895.5	2.7		90	6.08	nw.	8.7	
						750	923.7	4.7		82	7.00	nw.	7.5	
6:39	984.6	7.2	87	nw.	2.7	727	926.2	4.9	0.46	81	7.01	nw.	7.4	
						500	952.2	5.9		84	7.80	nw.	4.9	
						250	982.0	7.1		87	8.78	nw.	2.1	
6:49	984.6	7.2	87	nw.	1.8	225	984.6	7.2		87	8.84	nw.	1.8	8/10 A.St., nw.

October 31, 1918.

A. M.														
7:35	985.6	5.4	92	w.	5.8	225	985.6	5.4		92	8.25	w.	5.8	10/10 St., w.
						250	982.5	5.2		92	8.14	w.	6.1	
7:41	985.7	5.4	92	w.	6.7	495	953.6	2.9	0.93	96	7.23	w.	9.2	
						750	924.3	1.3		85	5.70	w.	9.6	Altitude of St. base about 650 m.
						1,000	895.8	−0.3		75	4.47	w.	10.1	
8:03	985.8	5.6	90	w.	4.9	1,072	887.8	−0.8	0.64	72	4.11	w.	10.2	
						1,250	868.2	−2.0		77	3.98	.....	9.7	
						1,500	841.3	−3.8		83	3.69	.....	9.1	6/10 St.Cu., w.; 4/10 Cu., w.
						1,750	815.4	−5.5		90	3.46	.....	8.4	
8:48	986.3	6.0	87	w.	6.7	1,807	809.2	−5.9	0.69	91	3.38	.....	8.0	Rain from 10:24 to 11:30 a. m.
						2,000	789.6	−6.8		94	3.23	.....	8.2	
9:15	986.4	6.4	81	w.	5.8	*2,040	785.7	−7.0	0.47	95	3.21	.....	8.3	10/10 St.Cu., w.

*Clock stopped.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918.*

November 1, 1918 (No. 1).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
7:50	994.9	1.4	82	wnw.	5.4	225	994.9	1.4	.....	82	5.54	wnw.	5.4	9/10 A.Cu., w.
.....	.....	.....	.....	.....	.....	250	991.9	1.1	.....	83	5.49	wnw.	5.5	
.....	.....	.....	.....	.....	.....	500	961.2	−1.4	.....	91	4.95	w.	6.2	
8:08	994.9	2.0	83	wnw.	5.4	561	954.0	−2.0	1.01	93	4.81	w.	6.4	
.....	.....	.....	.....	.....	.....	750	931.2	−3.0	.....	83	3.94	wnw.	7.3	Altitude of A.Cu. base about 950 m.
8:22	994.9	2.2	80	wnw.	5.4	872	917.2	−3.6	0.51	77	3.48	wnw.	7.9	
.....	.....	.....	.....	.....	.....	1,000	902.3	−4.2	.....	80	3.44	wnw.	7.5	
.....	.....	.....	.....	.....	.....	1,250	874.2	−5.3	.....	87	3.40	nw.	6.7	
8:50	994.9	2.9	76	wnw.	6.7	*1,262	873.1	−5.4	0.46	87	3.38	nw.	6.7	6/10 A.St., w.; 3/10 Cu., w.

November 1, 1918 (No. 2).

P. M.														
2:08	994.6	3.8	68	wsw.	5.8	225	994.6	3.8	.....	68	5.45	wsw.	5.8	10/10 A.Cu., w.
.....	.....	.....	.....	.....	.....	250	991.6	3.6	.....	68	5.38	wsw.	5.9	
2:09	994.6	3.7	69	wsw.	5.8	439	968.6	1.8	0.93	70	4.87	wsw.	6.6	
.....	.....	.....	.....	.....	.....	500	961.0	1.1	.....	72	4.77	wsw.	6.2	
2:33	994.8	3.0	72	wsw.	5.4	751	931.7	−1.6	1.09	81	4.33	wsw.	4.5	
.....	.....	.....	.....	.....	.....	1,000	903.0	−3.5	.....	82	3.74	wsw.	6.0	7/10 A.Cu., w.
3:15	995.0	3.6	71	wsw.	4.0	1,028	900.1	−3.9	0.82	82	3.62	wsw.	6.3	
.....	.....	.....	.....	.....	.....	1,000	903.0	−3.7	.....	81	3.63	wsw.	6.3	
.....	.....	.....	.....	.....	.....	750	931.5	−1.5	.....	76	4.10	w.	6.7	
3:26	995.0	3.4	70	w.	4.0	527	958.4	0.4	0.93	72	4.53	w.	7.0	
.....	.....	.....	.....	.....	.....	500	961.2	0.7	.....	72	4.63	w.	6.8	
.....	.....	.....	.....	.....	.....	250	992.0	3.0	.....	69	5.23	w.	5.1	
3:30	995.0	3.2	69	w.	4.9	225	995.0	3.2	.....	69	5.31	w.	4.9	6/10 A.Cu., w.

November 2, 1918.

A. M.														
8:25	999.0	2.5	76	s.	1.8	225	999.0	2.5	.....	76	5.56	s.	1.8	Few Ci., w
.....	.....	.....	.....	.....	.....	250	996.0	2.5	.....	75	5.48	s.	2.1	
8:28	999.0	2.6	75	s.	1.8	483	967.6	2.3	0.08	65	4.69	ssw.	5.2	
.....	.....	.....	.....	.....	.....	500	965.3	2.2	.....	65	4.65	ssw.	5.2	
.....	.....	.....	.....	.....	.....	750	936.0	1.2	.....	66	4.40	ssw.	3.8	
10:15	999.0	7.1	68	ssw.	4.5	888	920.6	0.7	0.63	67	4.31	ssw.	3.0	
.....	.....	.....	.....	.....	.....	750	936.0	1.9	.....	67	4.70	ssw.	2.7	
.....	.....	.....	.....	.....	.....	500	965.8	4.1	.....	66	5.41	ssw.	2.1	
10:47	999.0	8.0	57	ssw.	3.6	464	970.2	4.4	1.51	66	5.52	ssw.	2.0	
.....	.....	.....	.....	.....	.....	250	996.0	7.6	.....	58	6.06	ssw.	3.4	
10:50	999.0	8.0	57	ssw.	3.6	225	999.0	8.0	.....	57	6.12	ssw.	3.6	Few Ci.St., w.

November 3, 1918.

A. M.														
7:31	993.2	8.0	61	s.	4.9	225	993.2	8.0	.....	61	6.55	s.	4.9	1/10 A.St., w.
.....	.....	.....	.....	.....	.....	250	990.7	8.1	.....	60	6.48	s.	5.5	
.....	.....	.....	.....	.....	.....	500	962.0	8.9	.....	48	5.47	ssw.	11.4	
.....	.....	.....	.....	.....	.....	750	933.0	9.7	.....	35	4.21	sw.	17.3	
8:28	992.6	10.2	56	s.	6.7	923	912.6	10.3	−0.33	27	3.38	sw.	21.4	
.....	.....	.....	.....	.....	.....	1,000	904.0	9.8	.....	29	3.51	sw.	21.3	
.....	.....	.....	.....	.....	.....	1,250	876.0	8.4	.....	37	4.08	sw.	21.2	
.....	.....	.....	.....	.....	.....	1,500	849.0	6.9	.....	45	4.48	sw.	21.0	
.....	.....	.....	.....	.....	.....	1,750	823.0	5.5	.....	52	4.70	sw.	20.8	2/10 A.St., w.
.....	.....	.....	.....	.....	.....	2,000	798.0	4.0	.....	60	4.88	ssw.	20.7	
.....	.....	.....	.....	.....	.....	2,250	774.1	2.5	.....	67	4.90	ssw.	20.5	
.....	.....	.....	.....	.....	.....	2,500	751.0	1.1	.....	75	4.96	ssw.	20.3	
9:52	991.9	13.0	49	ssw.	4.9	2,666	736.2	0.1	0.41	80	4.92	ssw.	20.2	
.....	.....	.....	.....	.....	.....	2,500	751.0	0.5	.....	91	5.76	ssw.	19.6	2/10 Ci.Cu., sw.; 5/10 St.Cu., sw.
10:35	991.3	13.0	50	ssw.	7.2	2,366	763.2	0.8	−1.06	100	6.47	ssw.	19.1	Altitude of St.Cu. base about 2,300 m.
10:39	991.2	12.9	51	ssw.	7.6	2,262	773.0	−0.3	0.65	98	5.84	ssw.	19.9	
.....	.....	.....	.....	.....	.....	2,250	773.9	−0.2	.....	98	5.89	ssw.	20.0	
.....	.....	.....	.....	.....	.....	2,000	797.3	1.4	.....	94	6.35	ssw.	21.1	
.....	.....	.....	.....	.....	.....	1,750	821.8	3.0	.....	90	6.82	ssw.	22.2	
.....	.....	.....	.....	.....	.....	1,500	847.8	4.7	.....	86	7.34	ssw.	23.4	9/10 St.Cu., sw.
11:12	990.6	12.6	54	ssw.	6.7	1,299	869.8	6.0	−1.17	83	7.76	ssw.	24.3	
.....	.....	.....	.....	.....	.....	1,250	875.0	5.4	.....	82	7.36	ssw.	21.5	
11:14	990.6	12.5	55	ssw.	6.3	1,205	879.9	4.9	0.80	81	7.01	ssw.	19.0	
.....	.....	.....	.....	.....	.....	1,000	902.0	6.5	.....	69	6.68	ssw.	19.4	
11:25	990.4	12.4	54	ssw.	6.7	869	916.4	7.6	0.75	62	6.47	ssw.	19.6	
.....	.....	.....	.....	.....	.....	750	930.0	8.5	.....	62	6.88	ssw.	17.0	
.....	.....	.....	.....	.....	.....	500	958.5	10.4	.....	61	7.69	ssw.	11.7	Rain from 11:35 a. m.
.....	.....	.....	.....	.....	.....	250	978.3	12.2	.....	61	8.67	ssw.	6.3	
11:38	990.2	12.4	61	ssw.	5.8	225	990.2	12.4	.....	61	8.78	ssw.	5.8	Partial rainbow in north at 11:35 a. m., becoming complete at 11:50 a. m., and ending at 12:10 p. m.; 8/10 St.Cu., sw.

*Clock stopped.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 4, 1918.

Surface.						At different heights above sea.								
				Wind.					$\frac{\Delta t}{100m.}$	Humidity.		Wind.		Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Dir.	Vel.	Altitude.	Pressure	Temperature.		Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
7:48	996.3	9.4	76	nw.	4.9	225	996.3	9.4	.....	76	8.96	nw.	4.9	9/10 A.Cu., nw.
						250	993.2	9.1	.....	77	8.90	nw.	5.4	
7:53	996.3	9.4	76	nw.	4.9	450	969.4	6.7	1.20	84	8.24	nnw.	9.7	
						500	963.7	6.4	.....	84	8.07	nnw.	9.7	
						750	934.4	4.8	.....	83	7.14	nnw.	9.4	4/10 A.Cu., nw.
						1,000	906.1	3.2	.....	82	6.31	nnw.	9.2	
						1,250	878.8	1.5	.....	81	5.52	nnw.	9.0	
8:33	996.5	10.0	79	nnw.	6.7	1,489	853.3	0.0	0.64	80	4.89	nnw.	8.8	
						1,500	852.0	0.2	.....	76	4.71	nnw.	9.0	
8:40	996.5	10.1	80	nnw.	6.3	1,715	829.7	5.1	−2.26	1	0.09	nw.	12.6	
						1,750	825.7	5.0	.....	*1	0.09	nw.	12.5	
						2,000	803.0	4.0	.....	*1	0.08	nw.	12.0	
						2,250	775.5	3.0	.....	*1	0.08	nw.	11.4	
9:09	996.6	11.0	74	nnw.	7.2	2,488	754.5	2.0	0.40	*1	0.07	nw.	10.9	
						2,500	753.2	1.9	.....	*1	0.07	nw.	10.8	
						2,750	730.8	0.6	.....	*1	0.06	nw.	9.7	
						3,000	708.4	−0.8	.....	*1	0.06	nw.	8.5	
10:11	997.0	11.0	78	n.	4.9	3,046	704.5	−1.0	0.60	*1	0.06	nw.	8.3	8/10 St.Cu., n.; 1/10 Cu., n.
						3,000	708.4	−0.7	.....	*1	0.06	nw.	8.3	
						2,750	731.6	0.9	.....	*1	0.07	nw.	8.3	
						2,500	754.2	2.6	.....	*1	0.07	nw.	8.2	
10:33	997.3	11.0	74	n.	5.8	2,422	761.8	3.1	0.35	*1	0.08	nw.	8.2	
						2,250	776.5	3.7	.....	*1	0.08	nw.	8.9	
						2,000	801.1	4.6	.....	*1	0.08	nw.	10.0	
						1,750	827.3	5.4	.....	*1	0.09	nw.	11.0	
11:00	997.6	11.0	74	nne.	5.8	1,525	850.8	6.2	−4.20	*1	0.09	nw.	12.0	
						1,500	853.4	5.2	.....	*1	0.09	nw.	11.0	
11:02	997.6	11.0	74	nne.	5.8	1,394	864.6	0.7	0.74	*1	0.05	nw.	6.5	
						1,250	880.3	1.8	.....	30	1.39	nnw.	6.5	Altitude of St.Cu. base about 900 m.
						1,000	907.9	3.6	.....	53	4.19	n.	6.5	
						750	936.1	5.5	.....	86	7.77	nne.	6.5	
11:12	997.6	11.2	74	nne.	5.8	693	942.7	5.9	1.18	93	8.64	nne.	6.5	
						500	965.2	8.2	.....	85	9.24	nne.	5.8	
						250	994.7	11.1	.....	74	9.78	nne.	5.0	
11:16	997.6	11.4	73	nne.	4.9	225	997.6	11.4	.....	73	9.84	nne.	4.9	9/10 St.Cu., n.

November 5, 1918.

A. M.														
7:40	1,000.7	4.5	83	e.	5.8	225	1,000.7	4.5	.....	83	6.99	e.	5.8	2/10 Cl., w.
						250	997.9	4.5	.....	83	6.99	e.	6.0	
						500	968.0	4.1	.....	78	6.39	ese.	7.6	
7:44	1,000.7	5.0	83	e.	5.8	738	939.5	3.7	0.16	73	5.81	se.	9.2	
						750	938.5	3.6	.....	73	5.77	se.	9.1	
						1,000	910.0	2.6	.....	80	5.90	se.	6.3	
8:34	1,000.9	7.0	79	se.	7.2	1,021	907.9	2.5	0.42	81	5.92	se.	6.1	
						1,250	882.7	5.6	.....	45	4.10	se.	4.8	4/10 Ci.St., w.
						1,500	856.8	8.9	.....	6	0.68	se.	3.5	
9:43	1,001.2	9.6	70	se.	6.7	1,530	853.9	9.3	−0.95	1	0.12	se.	3.3	
						1,500	856.8	9.1	.....	1	0.12	se.	3.7	
						1,250	883.5	7.7	.....	1	0.11	sse.	5.8	
10:28	1,001.2	10.7	69	se.	8.9	1,151	894.1	7.2	−5.44	1	0.10	sse.	8.0	
10:34	1,001.1	11.2	71	se.	8.0	1,075	902.8	2.9	0.71	51	3.84	sse.	8.9	
						1,000	911.0	3.4	.....	56	4.37	sse.	8.9	
						750	939.0	5.2	.....	71	6.28	sse.	9.0	
10:43	1,001.1	10.7	69	se.	7.2	594	957.3	6.3	1.22	81	7.74	sse.	9.0	
						500	968.0	7.5	.....	77	7.98	sse.	7.8	
						250	997.2	10.5	.....	68	8.64	se.	7.3	
10:49	1,001.1	10.8	67	se.	7.2	225	1,001.1	10.8	.....	67	8.68	se.	7.2	4/10 Cl.St., w.

November 6, 1918, series (No. 1).

A. M.														
8:11	998.2	6.8	81	sse.	4.9	225	998.2	6.8	.....	81	8.00	sse.	4.9	2/10 Cl.St., sw.
						250	995.2	7.1	.....	79	7.97	sse.	4.9	
						500	965.9	10.1	.....	56	6.92	s.	5.4	
						750	937.0	13.0	.....	33	4.94	sw.	5.8	
8:25	998.1	7.6	80	sse.	4.9	834	927.7	14.0	−1.18	25	4.00	sw.	5.9	
						1,000	900.2	13.6	.....	20	3.12	sw.	6.5	
						1,250	882.8	13.1	.....	11	1.66	sw.	7.3	
8:43	998.0	8.2	77	sse.	4.5	1,323	875.2	12.9	0.22	9	1.34	sw.	7.6	
						1,500	856.9	11.8	.....	8	1.11	sw.	8.9	
						1,750	831.7	10.3	.....	7	0.88	sw.	10.7	
						2,000	806.9	8.7	.....	6	0.68	sw.	12.5	
8:57	997.9	9.4	77	sse.	4.5	2,114	795.8	8.0	0.62	5	0.54	sw.	13.2	
						2,250	782.8	7.4	.....	6	0.62	sw.	12.8	
						2,500	759.2	6.2	.....	9	0.85	sw.	12.0	
						2,750	736.4	5.0	.....	11	0.96	sw.	11.1	
						3,000	714.4	3.8	.....	14	1.12	sw.	10.2	
9:28	997.9	11.4	74	s.	4.9	3,148	701.7	3.1	0.47	15	1.14	sw.	9.7	
						3,250	692.7	2.3	.....	20	1.44	sw.	10.5	
						3,500	671.5	0.2	.....	32	1.36	wsw.	12.4	
						3,750	651.3	−1.9	.....	44	2.30	wsw.	14.3	
10:14	997.8	13.8	64	s.	4.9	3,847	643.4	−2.7	0.84	49	2.39	wsw.	15.1	1/10 Cl.St., sw.
						3,750	651.3	−1.9	.....	47	2.45	wsw.	14.5	
						3,500	671.5	0.2	.....	42	2.60	wsw.	13.1	
						3,250	692.7	2.3	.....	37	2.67	wsw.	11.6	
10:42	997.7	15.0	58	s.	4.0	2,995	714.8	4.5	0.23	32	2.69	wsw.	10.1	
						2,750	736.4	5.2	.....	30	2.66	wsw.	10.9	
						2,500	759.2	5.9	.....	27	2.51	sw.	11.8	

* Humidity less than 1 per cent.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 6, 1918, series (No. 1)—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:57	997.6	16.0	54	s.	4.0	2,271	781.2	6.5	0.73	25	2.42	sw.	12.6	
						2,250	783.4	6.7		25	2.45	sw.	12.6	
						2,000	807.3	8.5		22	2.44	sw.	12.1	
						1,750	831.8	10.3		19	2.38	sw.	11.6	
11:08	997.6	16.6	52	s.	4.0	1,544	852.7	11.8	0.24	17	2.35	sw.	11.2	
						1,500	857.2	11.9		20	2.79	sw.	10.9	
						1,250	883.2	12.5		36	5.22	sw.	9.0	
11:21	997.5	16.8	54	ssw.	4.5	1,045	905.1	13.0	0.32	49	7.34	sw.	7.4	
						1,000	909.8	13.1		48	7.24	sw.	7.7	
						750	937.2	14.0		44	7.03	sw.	9.1	
11:27	997.5	17.4	52	ssw.	4.9	645	949.2	14.3	−0.12	42	6.85	sw.	9.7	
11:32	997.4	17.2	53	ssw.	4.5	599	954.2	13.1	1.15	43	6.48	sw.	9.8	
						500	965.5	14.2		45	7.29	sw.	8.5	
						250	994.4	17.1		51	9.94	ssw.	5.2	
11:38	997.4	17.4	52	ssw.	4.9	225	997.4	17.4		52	10.33	ssw.	4.9	Cloudless.

November 6, 1918, series (No. 2).

P. M.														
12:19	996.7	18.6	46	s.	6.3	225	996.7	18.6		46	9.86	s.	6.3	Cloudless.
						250	993.8	18.3		46	9.67	s.	6.5	
						500	965.0	15.8		47	8.44	ssw.	8.7	
12:40	996.5	19.2	45	ssw.	6.3	720	940.0	13.5	1.03	48	7.43	ssw.	10.6	
						750	936.3	13.5		46	7.12	ssw.	10.8	
						1,000	909.0	13.4		33	5.07	ssw.	12.1	
						1,250	882.3	13.3		19	2.90	sw.	13.5	
1:05	996.3	19.4	45	s.	4.9	1,395	867.3	13.2	0.05	13	1.97	sw.	14.1	
						1,500	855.4	12.6		22	3.21	sw.	13.5	
						1,750	831.1	10.6		44	5.62	sw.	12.0	
						2,000	805.7	8.8		66	7.48	sw.	10.6	
1:39	996.0	20.0	45	ssw.	5.4	2,180	789.3	7.5	0.73	82	8.50	sw.	9.5	
						2,250	782.7	7.1		82	8.27	sw.	9.8	
						2,500	759.2	5.7		83	7.60	wsw.	10.9	
2:11	995.9	20.4	42	ssw.	3.6	2,742	737.1	4.4	0.55	84	7.03	wsw.	12.0	
						2,750	736.2	4.4		84	7.03	wsw.	12.1	
						3,000	714.1	3.2		74	5.09	wsw.	14.0	
						3,250	692.4	1.9		65	4.56	sw.	15.9	
						3,500	671.2	0.7		55	3.54	sw.	17.8	
2:28	995.9	20.4	43	ssw.	4.9	3,681	655.0	−0.2	0.49	48	2.88	sw.	19.2	2/10 Cl.St., w.
						3,750	650.0	−0.8		43	2.46	sw.	18.6	
						4,000	629.7	−2.9		26	1.26	wsw.	16.6	
						4,250	610.4	−4.8		8	0.33	w.	14.5	
3:25	995.9	19.9	47	ssw.	4.5	4,328	604.6	−5.4	0.78	3	0.12	w.	13.9	
						4,250	610.4	−4.8		7	0.29	w.	14.2	
						4,000	629.7	−2.9		20	0.96	wnw.	15.4	
						3,750	650.0	−1.0		33	1.85	wnw.	16.5	
						3,500	671.2	0.9		46	3.00	nw.	17.6	
3:50	995.9	18.0	57	ssw.	4.0	3,457	674.9	1.2	0.68	48	3.20	nw.	17.8	
						3,250	692.4	2.6		47	3.46	nw.	16.9	
						3,000	714.1	4.3		46	3.82	nw.	15.9	
4:02	995.9	17.9	57	ssw.	4.0	2,971	716.7	4.5	−0.51	46	3.87	nw.	15.8	
						2,750	736.2	3.4		56	4.37	wnw.	11.2	
4:04	995.9	17.7	56	ssw.	3.6	2,714	739.5	3.2	0.82	58	4.46	wnw.	10.5	
						2,500	759.2	4.9		66	5.72	w.	10.9	
						2,250	782.7	7.0		75	7.52	wsw.	11.4	
4:18	995.9	16.1	62	s.	4.0	2,041	802.8	8.7	0.77	82	9.22	sw.	11.8	4/10 A.Cu., nw.
						2,000	805.7	9.0		78	8.95	sw.	11.9	
						1,750	831.1	10.9		55	7.17	sw.	12.4	
						1,500	856.4	12.9		32	4.76	wsw.	12.8	
4:36	995.9	15.4	63	s.	4.9	1,249	882.3	14.8	−0.31	9	1.51	wsw.	13.3	
						1,000	909.0	14.2		20	3.24	wsw.	13.1	
4:42	995.9	15.1	63	s.	4.5	956	913.6	13.9	0.74	27	4.29	wsw.	13.0	
						750	936.3	15.4		40	7.00	sw.	12.3	
4:48	995.9	14.9	64	s.	4.5	646	947.6	16.2	−0.36	46	8.47	sw.	12.0	
						500	964.0	15.7		53	9.46	ssw.	9.2	
						250	992.8	14.8		64	10.77	s.	4.5	
5:00	995.9	14.7	65	s.	4.0	225	995.9	14.7		65	10.87	s.	4.0	8/10 A.Cu., nw.

November 6, 1918, series (No. 3).

P. M.														
5:59	995.9	13.5	70	se.	2.7	225	995.9	13.5		70	10.83	se.	2.7	8/10 A.Cu., nw.
						250	993.0	13.8		68	10.73	se.	3.7	
6:01	995.9	13.5	70	se.	2.7	478	956.5	16.7	−1.26	47	8.93	ssw.	12.8	
						500	964.1	16.5		47	8.82	ssw.	12.8	
						750	936.0	14.8		43	7.24	ssw.	13.0	
6:22	995.9	14.0	65	sse.	4.0	992	909.7	13.1	0.70	39	5.88	ssw.	13.2	
						1,000	909.0	13.1		39	5.88	ssw.	13.2	
						1,250	881.9	12.2		49	6.90	ssw.	13.4	
						1,500	855.8	11.3		58	7.77	ssw.	13.6	
						1,750	830.3	10.4		68	8.57	ssw.	13.9	
7:07	995.9	13.2	68	sse.	3.6	1,808	824.9	10.2	0.36	70	8.72	ssw.	13.9	
						2,000	805.9	8.8		72	8.16	.....	12.4	
						2,250	781.7	6.9		74	7.36	.....	10.4	
8:25	995.9	11.2	77	sse.	3.6	2,462	761.0	5.4	0.71	76	6.82	.....	8.8	3/10 A.Cu.,
						2,250	781.4	6.8		76	7.51	.....	9.1	
						2,000	804.9	8.5		75	8.32	.....	9.4	
8:46	995.9	11.1	73	s.	4.0	*1,918	812.6	9.1		75	8.67	.....	9.5	

*Kite broke away.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 9, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:10	988.2	6.2	87	WSW.	5.8	225	988.2	6.2	.....	87	8.25	WSW.	5.8	1/10 A.St., w.
						250	985.3	6.0	.....	86	8.04	WSW.	6.1	
						500	955.5	4.2	.....	72	5.94	W.	9.6	
8:18	988.3	6.3	83	WSW.	5.4	605	943.2	3.4	0.74	66	5.15	W.	11.0	
						750	926.4	3.0	.....	61	4.62	W.	11.9	
						1,000	898.4	2.3	.....	52	3.75	W.	13.4	
8:42	988.6	6.9	78	WSW.	7.2	1,190	877.9	1.7	0.29	46	3.18	W.	14.6	
						1,250	871.2	1.5	.....	46	3.13	W.	14.7	
						1,500	844.8	0.4	.....	46	2.89	W.	14.9	
						1,750	819.0	−0.6	.....	45	2.61	WSW.	15.2	
						2,000	793.9	−1.6	.....	45	2.41	WSW.	15.4	
9:45	989.3	7.4	69	W.	9.8	2,066	787.3	−1.9	0.56	45	2.35	WSW.	15.5	1/10 Cu., w.
						2,000	793.9	−1.4	.....	47	2.55	WSW.	15.8	
						1,750	819.6	0.4	.....	56	3.52	WSW.	16.8	
10:00	989.5	7.5	72	W.	8.0	1,687	825.5	0.8	−0.70	58	3.75	WSW.	17.0	
						1,500	845.1	−0.5	.....	59	3.46	W.	16.5	
10:15	989.5	7.5	72	W.	8.0	1,414	854.2	−1.1	0.52	59	3.29	W.	16.2	
						1,250	872.0	−0.2	.....	64	3.85	W.	14.7	
						1,000	896.2	1.1	.....	71	4.70	W.	12.4	
						750	927.6	2.4	.....	78	5.66	W.	10.0	
10:35	989.5	7.7	69	W.	8.9	649	939.4	2.9	1.06	81	6.10	W.	9.1	
						500	956.7	4.5	.....	77	6.48	W.	9.0	
						250	986.4	7.1	.....	70	7.06	W.	8.9	
10:48	989.5	7.4	69	W.	8.9	225	989.5	7.4	.....	69	7.11	W.	8.9	3/10 Cu., w.

November 12, 1918, series (No. 1).

A. M.														
8:29	997.0	2.3	86	SSW.	3.1	225	997.0	2.3	.....	86	6.20	SSW.	3.1	2/10 Cl.Cu., sw.; 2/10 Cl.St., sw
						250	994.0	2.5	.....	86	6.29	SSW.	4.4	
8:32	996.9	2.4	86	SSW.	3.1	397	975.9	3.8	−0.87	83	6.66	SSW.	12.0	
						500	933.7	4.9	.....	67	5.80	SW.	10.8	
						750	934.8	7.6	.....	27	3.03	WSW.	8.0	
9:14	996.5	4.7	81	SSW.	4.0	932	914.1	9.6	−1.08	*1	0.12	W.	6.0	
						1,000	907.0	9.1	.....	3	0.35	W.	6.1	
						1,250	879.8	7.4	.....	10	1.03	WSW.	6.3	2/10 A.St., sw ; 5/10 A.Cu., sw.
10:03	996.3	6.6	77	SW.	5.8	1,396	864.0	6.4	0.69	14	1.35	WSW.	6.4	
						1,500	853.4	5.9	.....	14	1.30	WSW.	7.6	
						1,750	827.4	4.6	.....	15	1.27	WSW.	10.5	
						2,000	802.4	3.3	.....	15	1.16	WSW.	13.3	
						2,250	777.8	2.0	.....	16	1.13	WSW.	16.2	
10:47	995.8	7.8	68	SW.	3.6	2,277	775.0	1.9	0.51	16	1.12	WSW.	16.5	
						2,500	753.5	.0.4	.....	14	0.88	WSW.	16.4	
						2,750	730.0	−1.2	.....	12	0.66	W.	16.2	
						3,000	707.8	−2.8	.....	10	0.47	W.	16.1	
						3,250	685.8	−4.5	.....	8	0.34	WNW.	15.9	
11:08	995.5	7.9	68	SW.	3.6	3,300	681.1	−4.8	0.59	8	0.33	WNW.	15.9	
						3,250	685.5	−4.5	.....	8	0.34	WNW.	15.8	
						3,000	707.3	−3.2	.....	7	0.34	WNW.	15.0	
11:25	995.2	8.3	69	SW.	5.4	2,771	727.7	−1.9	0.69	6	0.31	WNW.	14.4	
						2,750	729.8	−1.8	.....	6	0.32	WNW.	14.4	
						2,500	752.9	−0.1	.....	9	0.55	WNW.	14.8	
						2,250	776.8	1.5	.....	11	0.75	WNW.	15.2	
11:40	994.9	8.5	67	SW.	5.4	2,241	777.4	1.6	0.45	11	0.75	WNW.	15.2	
						2,000	801.2	2.7	.....	10	0.74	W.	13.0	
						1,750	826.0	3.8	.....	10	0.80	W.	10.8	7/10 Cl.St., w.
11:53	994.7	8.9	66	SW.	4.0	1,551	846.5	4.7	0.63	9	0.77	WSW.	9.0	Solar halo from 11:30 a. m. to 12:25 p. m.
						1,500	852.0	5.0	.....	11	0.96	WSW.	9.3	
						1,250	878.2	6.6	.....	20	1.95	WSW.	10.6	
P. M.														
12:04	994.6	9.0	65	SW.	4.0	1,125	891.5	7.4	0.07	25	2.58	WSW.	11.2	
						1,000	905.3	7.5	.....	28	2.90	WSW.	10.1	
						750	933.0	7.7	.....	34	3.57	WSW.	7.9	
12:10	994.5	9.2	65	SW.	4.9	691	939.3	7.7	−2.05	35	3.68	WSW.	7.4	
12:15	994.4	9.0	67	SW.	4.5	572	953.1	5.2	1.10	44	3.89	WSW.	7.2	
						500	961.7	6.0	.....	48	4.49	WSW.	6.6	
						250	991.6	8.7	.....	63	7.09	SW.	4.7	
12:21	994.4	9.0	65	SW.	4.5	225	994.4	9.0	.....	65	7.46	SW.	4.5	2/10 A.St., sw.

November 12, 1918, series (No. 2).

P. M.														
1:12	993.8	10.9	70	WSW.	6.7	225	993.8	10.9	.....	70	9.13	WSW.	6.7	2/10 A.St., sw.
						250	990.9	10.6	.....	70	8.95	WSW.	6.7	
						400	981.0	7.3	.....	67	6.85	WSW.	6.4	
1:24	993.7	11.0	69	WSW.	5.4	507	990.5	7.2	1.31	67	6.81	WSW.	6.4	
						750	932.0	5.6	.....	72	6.55	WSW.	6.1	
1:54	993.5	11.3	64	WSW.	5.8	831	923.0	5.1	0.65	74	6.50	WSW.	6.0	
						1,000	904.9	5.0	.....	72	6.28	WSW.	8.0	
						1,250	876.7	4.7	.....	70	5.98	W.	10.9	
						1,500	850.6	4.5	.....	67	5.64	W.	13.8	
2:26	993.4	11.2	65	WSW.	6.3	1,516	848.8	4.5	0.09	67	5.64	W.	14.0	
						1,750	824.5	2.4	.....	79	5.74	W.	13.7	
						2,000	799.1	0.1	.....	91	5.60	W.	13.5	

*Estimated.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 12, 1918, series (No. 2)—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
2:54	993.2	11.0	68	w.	5.4	2 098	789.4	−0.8	0.91	96	5.48	w.	13.4	
						2 250	774.5	0.6		65	4.15	w.	14.5	Altitude of A.Cu. base about 2,050 m.
3:07	993.2	10.9	67	w.	4.5	2 364	763.8	1.6	−0.90	41	2.81	w.	15.3	
						2 500	750.7	0.7		37	2.38	w.	16.7	
						2 750	727.6	−1.0		31	1.74	w.	19.1	
3:29	993.2	10.7	68	w.	4.0	*2,938	710.7	−2.2	0.66	26	1.32	w.	21.0	9/10 A.Cu., nw.

November 12–13, 1918, series (No. 3).

P. M.														
9:26	994.2	2.7	94	sw.	3.1	225	994.2	2.7		94	6.97	sw.	3.1	Cloudless.
						250	991.0	3.5		87	6.83	sw.	4.0	
9:30	994.2	2.7	94	sw.	3.1	379	975.6	7.6	−3.18	51	5.32	wsw.	8.8	
						500	960.8	6.6		48	4.68	w.	8.7	
						750	931.9	4.7		41	3.50	w.	8.5	
						1,000	904.1	2.7		34	2.52	wnw.	8.2	
10:08	994.2	2.4	93	sw.	3.1	1,038	900.0	2.4	0.79	33	2.40	wnw.	8.2	
						1,250	876.8	0.7		34	2.19	wnw.	8.9	
						1,500	849.8	−1.3		36	1.97	wnw.	9.8	
10:48	994.2	2.2	90	sw.	4.0	1,706	827.8	−3.0	0.81	37	1.76	wnw.	10.5	
						1,750	823.4	−2.9		33	1.58	wnw.	11.2	
						2,000	797.5	−2.2		12	0.61	wnw.	15.1	
11:15	994.1	1.8	91	sw.	2.7	2,128	784.7	−1.9	−0.26	†1	0.05	wnw.	17.1	
						2,250	772.7	−2.2		†1	0.05	wnw.	18.6	
						2,500	748.7	−2.9		†1	0.05	wnw.	21.7	
A. M.														
12:17	993.9	1.3	86	sw.	3.6	2,595	739.8	−3.2	0.22	†1	0.05	wnw.	22.9	
						2,500	748.7	−3.0		†1	0.05	wnw.	22.3	
						2,250	772.7	−2.6		†1	0.05	wnw.	20.6	
12:58	993.9	1.2	82	sw.	3.1	2,128	784.7	−2.4	−2.13	†1	0.05	wnw.	19.8	
1:00	993.9	1.1	81	sw.	3.1	2,067	790.8	−3.7	0.63	†1	0.04	wnw.	19.8	
						2,000	797.5	−3.3		†1	0.05	wnw.	19.3	
						1,750	823.4	−1.7		†1	0.05	wnw.	17.6	
						1,500	849.8	−0.1		†1	0.06	wnw.	15.8	
						1,250	876.4	1.5		†1	0.07	wnw.	14.1	
1:25	993.7	1.0	82	sw.	3.6	1,169	885.0	2.0	0.76	†1	0.07	wnw.	13.5	
						1,000	903.7	3.3		2	0.15	wnw.	13.4	
						750	931.9	5.2		4	0.35	w.	13.2	
						500	960.8	7.0		6	0.60	w.	13.1	
1:43	993.6	0.7	81	sw.	3.1	416	970.5	7.7	−3.19	7	0.74	w.	13.0	
						250	990.8	2.4		72	5.23	sw.	4.4	
1:48	993.6	0.6	82	sw.	3.1	225	993.6	0.6		82	5.23	sw.	3.1	Cloudless.

November 13, 1918, series (No. 4).

A. M.														
2:44	993.8	0.0	81	sw.	3.6	225	993.8	0.0		81	4.93	sw.	3.6	Cloudless.
						250	990.9	1.4		76	5.14	sw.	5.8	
2:48	993.8	−0.1	82	sw.	3.6	377	975.4	8.4	−5.53	48	5.29	wsw.	17.0	
						500	960.7	7.4		49	5.05	wsw.	16.7	
						750	931.5	5.3		51	4.54	w.	16.2	
						1,000	903.4	3.3		53	4.10	w.	15.7	
						1,250	876.3	1.2		56	3.73	wnw.	15.2	
3:20	993.9	−0.5	87	wsw.	3.6	1,288	872.2	0.9	0.82	56	3.65	wnw.	15.1	
						1,500	849.8	0.3		42	2.62	wnw.	17.0	
						1,750	823.6	−0.3		25	1.49	wnw.	19.2	
						2,000	798.1	−1.0		9	0.51	wnw.	21.4	
4:15	994.0	−0.5	85	wsw.	3.1	2,116	786.5	−1.3	0.29	1	0.05	wnw.	22.4	
						2,000	798.1	−0.9		1	0.05	wnw.	21.4	
						1,750	823.6	−0.1		1	0.06	wnw.	19.3	
4:45	994.1	−0.6	86	wsw.	4.0	1,614	837.2	0.3	0.33	1	0.06	wnw.	18.1	
						1,500	849.8	0.7		10	0.64	wnw.	18.1	
						1,250	876.3	1.5		31	2.11	wnw.	18.1	
4:58	994.2	−0.6	86	sw.	3.6	1,094	893.4	2.0	0.88	44	3.11	wnw.	18.1	
						1,000	903.4	2.8		46	3.44	wnw.	17.6	
						750	931.5	5.0		51	4.45	wnw.	16.3	
5:18	994.1	−0.6	87	sw.	4.0	570	952.6	6.6	−2.06	54	5.26	wnw.	15.4	
						500	960.7	5.2		61	5.40	w.	13.1	
						250	991.0	0.0		85	5.19	sw.	4.8	
5:22	994.1	−0.5	87	sw.	4.0	225	994.1	−0.5		87	5.10	sw.	4.0	Cloudless.

November 13, 1918, series (No. 5).

A. M.														
7:50	994.2	1.4	79	w.	3.6	225	994.2	1.4		79	5.34	w.	3.6	Cloudless.
						250	990.9	1.8		78	5.43	w.	4.8	
7:52	994.2	1.6	78	w.	3.6	432	969.1	4.3	−1.40	74	6.15	w.	13.7	
						500	961.2	4.2		68	5.61	w.	14.3	
						750	931.9	3.8		46	3.69	wnw.	16.6	
8:08	994.2	2.2	78	w.	4.5	877	917.4	3.6	0.16	35	2.77	wnw.	17.8	
						1,000	903.0	3.1		28	2.14	wnw.	19.3	
						1,250	875.7	2.1		15	1.07	wnw.	22.3	
						1,500	849.0	1.0		1	0.07	wnw.	25.3	
8:24	994.1	3.0	76	w.	4.5	1,507	848.6	1.0	0.41	1	0.07	wnw.	25.4	
						1,750	823.0	0.5		1	0.06	wnw.	25.7	
						2,000	797.7	0.0		1	0.06	wnw.	26.1	

* Kites broke away.

†Estimated.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 13, 1918, series (No. 5)—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°C.	%		*m. p. s.*	*m.*	*mb.*	°C.		%	*mb.*		*m. p. s.*	
8:53	993.9	3.9	74	w.	5.4	2,085	789.2	−0.2	0.24	1	0.06	wnw.	26.2	
						2,000	797.7	0.0		1	0.06	wnw.	26.3	
						1,750	823.0	0.7		1	0.06	wnw.	26.7	
9:24	993.9	5.2	66	w.	5.4	1,518	847.3	1.4	0.69	1	0.07	wnw.	27.0	
						1,500	849.0	1.5		1	0.07	wnw.	26.8	
						1,250	875.7	3.3		1	0.08	wnw.	24.1	
9:37	993.9	5.8	68	w.	6.7	1,099	892.3	4.3	−0.43	1	0.08	wnw.	22.4	
						1,000	903.0	3.9		2	0.16	wnw.	20.6	
						750	931.8	2.8		3	0.22	wnw.	16.0	
9:46	993.9	5.9	64	w.	6.7	612	947.6	2.2	1.11	4	0.29	wnw.	13.5	
						500	960.8	3.4		20	1.56	wnw.	11.5	
						250	990.7	6.2		54	5.12	w.	7.1	
9:57	993.9	6.5	58	w.	6.7	225	993.9	6.5		58	5.61	w.	6.7	Cloudless.

November 13, 1918, series (No. 6).

A. M.														
10:42	993.4	7.6	56	wnw.	7.2	225	993.4	7.6		56	5.85	wnw.	7.2	Cloudless.
						250	990.2	7.3		56	5.73	wnw.	7.2	
						500	960.0	3.9		57	4.61	wnw.	6.8	
11:06	993.1	7.5	62	wnw.	6.3	508	959.2	3.8	1.34	57	4.57	wnw.	6.8	
						750	930.7	2.7		56	4.16	w.	8.7	
11:38	992.8	8.8	62	w.	7.2	900	913.8	2.0		56	3.95	w.	9.8	
						1,000	902.2	2.6		38	2.80	w.	12.9	
11:43	992.7	8.3	56	w.	6.3	1,114	889.9	3.2	−0.46	17	1.31	w.	16.4	
						1,250	874.5	2.5		16	1.17	w.	16.8	
						1,500	848.0	1.1		14	0.93	w.	17.6	
						1,750	821.9	−0.2		12	0.72	w.	18.3	
P. M.														
12:10	992.3	9.3	53	w.	7.6	1,841	812.8	−0.7	0.56	11	0.63	w.	18.6	
						2,000	796.6	−1.0		8	0.45	w.	20.2	
						2,250	771.5	−1.4		4	0.22	w.	22.8	
12:46	991.7	9.8	45	w.	8.5	2,398	757.6	−1.6	0.22	1	0.05	w.	24.3	
						2,250	771.5	−1.2		1	0.06	w.	23.1	
						2,000	796.0	−0.5		1	0.06	w.	21.0	
						1,750	821.0	0.3		1	0.06	w.	19.0	
1:34	991.1	10.3	44	w.	8.0	1,739	822.6	0.3	0.32	1	0.06	w.	18.9	
						1,500	847.0	1.1		1	0.07	w.	17.1	
						1,250	873.5	1.9		1	0.07	w.	15.1	
2:14	990.8	10.3	41	w.	7.6	1,079	892.4	2.4	0.72	1	0.07	w.	13.8	
						1,000	900.9	3.0		5	0.38	w.	13.2	
						750	929.2	4.8		17	1.46	w.	11.3	
						500	958.3	6.6		29	2.83	w.	9.4	
2:39	990.8	10.5	41	w.	7.6	482	960.4	6.7	1.48	30	2.94	w.	9.3	
						250	987.8	10.1		38	4.70	w.	7.4	
2:46	990.8	10.5	39	w.	7.2	225	990.8	10.5		39	4.95	w.	7.2	Cloudless.

November 14, 1918.

A. M.														
7:46	992.9	1.4	89	sse.	3.6	225	992.9	1.4		89	6.02	sse.	3.6	Cloudless.
						250	989.8	2.2		85	6.09	sse.	3.9	
						500	960.5	9.7		39	4.69	sw.	7.2	
8:49	993.1	5.8	73	ssw.	3.6	514	958.9	10.1	−3.01	37	4.57	sw.	7.4	
						750	932.2	9.3		34	3.98	sw.	8.9	
						1,000	904.8	8.5		31	3.44	sw.	10.5	
9:05	993.2	6.8	67	ssw.	3.1	1,115	892.1	8.1	0.33	29	3.13	sw.	11.2	
						1,250	877.8	7.2		30	3.05	sw.	11.4	
						1,500	851.4	5.7		31	2.84	sw.	11.9	
						1,750	825.5	4.1		33	2.70	sw.	12.4	
9:33	993.0	8.6	60	ssw.	4.0	1,759	824.7	4.0	0.64	33	2.68	sw.	12.4	
						2,000	800.4	3.2		32	2.46	sw.	12.0	
						2,250	776.0	2.2		31	2.22	wsw.	11.6	
						2,500	752.6	1.4		30	2.03	wsw.	11.3	
10:25	992.7	11.4	50	ssw	3.1	2,544	748.5	1.2	0.36	30	2.00	wsw.	11.2	
10:37	992.7	11.8	51	ssw.	4.0	2,689	735.2	1.9	−0.48	26	1.82	w.	8.9	
						2,750	729.4	1.5		27	1.84	w.	9.2	
11:02	992.5	13.5	47	ssw.	4.5	2,995	707.6	0.0	0.56	33	2.02	wsw.	10.5	
						2,750	729.0	1.3		30	2.01	wsw.	10.8	
						2,500	751.8	2.5		26	1.90	wsw.	11.1	
11:27	992.0	14.5	44	ssw.	3.6	2,431	758.4	2.9	−0.70	25	1.88	wsw.	11.2	
11:32	992.0	14.5	41	ssw.	4.5	2,289	771.7	1.9	0.34	28	1.96	wsw.	12.4	
						2,250	775.1	2.0		29	2.05	wsw.	12.3	
						2,000	799.5	2.9		38	2.86	sw.	11.6	
11:45	991.8	15.3	43	ssw.	4.0	1,849	814.8	3.4	0.62	43	3.35	ssw.	11.2	
						1,750	824.5	4.0		43	3.50	ssw.	11.5	
						1,500	850.4	5.6		42	3.82	ssw.	12.2	
						1,250	876.8	7.1		41	4.14	sw.	13.0	
P. M.														
12:05	991.4	15.8	40	ssw.	5.4	1,047	898.4	8.4	0.76	40	4.41	sw.	13.6	
						1,000	903.7	8.8		40	4.53	sw.	13.1	
						750	931.0	10.7		39	5.02	ssw.	10.6	
12:21	991.3	16.4	38	ssw.	5.4	550	953.8	12.2	1.29	38	5.40	ssw.	8.6	
						500	959.5	12.9		39	5.80	ssw.	8.1	
						250	988.2	16.1		41	7.50	ssw.	5.6	
12:29	991.2	16.4	41	ssw.	5.4	225	991.2	15.4		41	7.65	ssw.	5.4	Cloudless.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 15, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:02	989.8	7.9	65	sse.	3.6	225	983.8	7.9		65	6.92	sse.	3.6	6/10 Cl.St., sw.: 4/10 A.St., sw.
						250	986.9	9.4		63	7.43	sse.	8.9	Partial solar halo, 22° radius, from 7:45 to 8:05 a. m.
8:05	989.8	7.9	65	sse.	4.0	296	981.4	12.3	−6.20	58	8.30	s.	18.6	
						500	957.3	11.7		59	8.11	s.	17.8	
8:17	989.9	8.2	62	sse.	4.5	727	932.1	11.1	0.28	60	7.93	ssw.	17.0	2/10 A.St., sw.: 8/10 A.Cu., sw.
						750	929.3	10.9		59	7.69	ssw.	16.9	Clouds changing form rapidly.
						1,000	902.0	9.2		44	5.12	ssw.	15.5	
						1,250	875.2	7.4		30	3.09	ssw.	14.1	
8:48	990.1	8.9	64	sse.	4.5	1,460	853.2	5.9	0.71	18	1.67	ssw.	13.0	
						1,500	849.0	5.9		17	1.58	ssw.	13.2	
						1,750	823.0	5.9		10	0.93	ssw.	14.4	
						2,000	798.6	5.8		4	0.37	ssw.	15.6	
9:14	990.2	9.8	63	sse.	3.6	2,115	787.6	5.8	0.02	*1	0.09	ssw.	16.1	
						2,250	774.7	5.1		*1	0.09	ssw.	16.7	
						2,500	751.2	3.7		*1	0.08	ssw.	17.7	
						2,750	728.6	2.3		*1	0.07	ssw.	18.8	
						3,000	706.2	0.9		*1	0.07	ssw.	19.9	
9:53	990.2	11.0	64	s.	4.0	3,077	699.5	0.5	0.48	*1	0.06	ssw.	20.2	6/10 A.St., sw.: 4/10 A.Cu., sw.
						3,000	706.2	0.8		*1	0.06	ssw.	19.9	
						2,750	728.6	1.8		*1	0.07	ssw.	18.9	
						2,500	751.2	2.8		*1	0.07	ssw.	18.0	
						2,250	774.7	3.8		*1	0.08	ssw.	17.0	
10:20	990.4	12.2	63	s.	4.9	2,152	784.0	4.2	0.15	*1	0.08	ssw.	16.6	
						2,000	798.9	4.4		5	0.42	ssw.	16.4	
						1,750	824.0	4.8		11	0.95	ssw.	16.2	
10:50	990.7	13.3	58	s.	5.4	1,563	843.3	5.1	0.81	15	1.32	ssw.	16.0	
						1,500	850.0	5.6		19	1.73	ssw.	16.0	
						1,250	876.3	7.6		32	3.34	ssw.	16.0	
11:23	990.8	14.6	57	s.	4.9	1,000	903.1	9.6		46	5.50	ssw.	15.9	
						793	925.8	11.3	−0.18	58	7.77	ssw.	15.9	
11:30	990.8	15.1	55	s.	5.4	750	930.3	10.5		61	7.75	ssw.	15.0	
						736	932.1	10.3	1.00	62	7.77	ssw.	14.7	
						500	958.3	12.7		58	8.52	ssw.	10.2	
						250	988.0	15.2		53	9.15	s.	5.4	
11:37	990.8	15.4	53	s.	4.9	225	990.8	15.4		53	9.28	s.	4.9	4/10 A.St., sw.; 6/10 A.Cu., sw.

November 16, 1918.

A. M.														
11:02	984.1	14.0	85	sso.	8.0	225	984.1	14.0		85	13.58	sse.	8.0	10/10 St.Cu., s.
						250	981.2	13.9		86	13.66	sse.	8.6	
11:09	983.9	14.0	85	sse.	12.1	500	952.5	12.6		92	13.42	sse.	15.1	
						583	943.0	12.2	0.50	94	13.36	sse.	17.2	Altitude of St.Cu. base about 800 m.
						750	924.4	11.5		93	12.62	sse.	17.5	
						1,000	896.9	10.4		92	11.60	s.	18.0	
11:47	983.2	13.6	85	sse.	8.5	1,237	871.3	9.4	0.43	91	10.73	s.	18.4	
						1,250	870.0	9.3		91	10.67	s.	18.3	
						1,500	843.8	7.7		91	9.56	s.	18.1	
						1,750	818.1	6.2		92	8.72	ssw.	17.9	
P. M.														
12:04	982.9	13.5	86	sse.	7.2	1,857	807.8	5.5	0.63	92	8.31	ssw.	17.8	10/10 St.Cu., ssw.
						2,000	793.6	4.9		94	8.14	ssw.	17.7	
						2,250	769.8	3.8		98	7.86	ssw.	17.5	
12:35	982.4	13.4	89	sse.	7.2	2,391	756.2	3.2	0.49	100	7.69	ssw.	17.4	
						2,250	769.8	4.0		100	8.13	ssw.	17.6	
						2,000	793.6	5.3		100	8.91	ssw.	18.0	
						1,750	817.9	6.7		99	9.71	s.	18.3	
						1,500	842.8	8.1		99	10.69	s.	18.7	
1:17	981.8	13.2	90	sse.	7.2	1,476	845.1	8.2	0.38	99	10.76	s.	18.7	
						1,250	868.4	9.1		99	11.44	s.	17.7	
						1,000	894.8	10.0		100	12.28	sse.	16.5	
						750	922.0	11.0		100	13.13	sse.	15.4	
1:49	981.5	13.2	90	sse.	7.2	685	929.1	11.2	0.46	100	13.30	sse.	15.1	Rain from 1:40 to 2:00 p. m.
						500	950.0	12.0		96	13.47	sse.	11.7	
						250	978.7	13.2		91	13.80	sse.	7.2	
1:55	981.4	13.3	91	sse.	6.7	225	981.4	13.3		91	13.90	sse.	6.7	10/10 St.Cu., ssw.

November 17, 1918.

A. M.														
7:32	973.6	12.9	94	sse.	3.1	225	973.6	12.9		94	13.99	sse.	3.1	10/10 St., s.
						250	970.5	12.8		94	13.89	sse.	3.7	
7:38	973.6	12.9	94	sse.	3.6	500	942.3	12.0		95	13.33	s.	9.8	
						681	922.2	11.4	0.33	95	12.81	s.	14.2	
						750	914.8	11.0		94	12.34	s.	14.2	
						1,000	887.8	9.6		92	10.99	s.	14.2	Altitude of St. base about 650 m.
						1,250	861.4	8.4		90	9.92	s.	14.3	
8:05	973.6	13.2	93	sse.	2.7	1,438	842.0	7.4	0.49	88	9.06	s.	14.3	
						1,250	861.2	8.3		89	9.75	s.	12.8	8/10 St., s.
						1,000	887.2	9.4		91	10.73	s.	10.8	
8:10	973.6	13.2	93	sse.	2.7	780	910.9	10.4	0.90	93	11.73	s.	9.1	
						750	914.0	10.7		93	11.97	s.	9.1	
8:52	973.6	13.6	93	sse.	3.1	602	931.0	12.0	0.53	92	12.91	s.	8.9	
						500	942.0	12.5		92	13.33	s.	7.2	
						250	970.5	13.9		93	14.77	sse.	3.1	
8:59	973.6	14.0	93	sse.	2.7	225	973.6	14.0		93	14.86	sse.	2.7	3/10 A.Cu., sw.; 6/10 St.Cu., s.

*Estimated.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 20, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
9:13	988.3	4.0	89	nw.	5.4	225	988.3	4.0	.....	80	7.55	nw.	5.4	10/10 St.Cu., nw.
						250	985.2	4.4	.....	89	7.45	nw.	5.7	
						500	955.7	2.3	.....	92	6.63	nw.	8.4	
9:29	988.4	5.0	86	nw.	5.4	624	941.0	1.2	0.85	94	6.26	nw.	9.8	
						750	926.5	0.4	.....	94	5.91	nw.	9.4	Altitude of St.Cu. base about 650 m.
						1,000	898.0	−1.1	.....	94	5.24	nw.	8.6	
10:10	988.8	5.2	83	nw.	4.0	1,202	875.8	−2.4	0.62	94	4.70	nw.	7.9	
						1,250	870.3	−2.6	.....	94	4.62	nw.	.....	
						1,500	843.4	−3.8	.....	92	4.03	nw.	.....	Rain from 11:03 to 11:32 a. m.
						1,750	817.0	−5.1	.....	90	3.53	nw.	.....	4/10 A.Cu., nw.; 6/10 Nb., nw.
11:17	988.9	5.6	80	nw.	8.5	1,760	816.2	−5.1	0.41	90	3.53	nw.	.....	
						1,750	817.0	−5.1	.....	90	3.53	nw.	.....	
						1,500	843.4	−4.2	.....	91	3.91	nw.	.....	
						1,250	871.0	−3.4	.....	91	4.19	nw.	.....	
11:35	989.0	5.6	81	nw.	5.4	1,001	898.3	−2.5	1.08	92	4.55	nw.	.....	
						750	927.3	0.2	.....	95	5.89	nw.	.....	
						500	956.5	2.9	.....	98	7.38	nw.	.....	
11:47	989.0	5.5	81	nw.	5.8	382	970.1	4.2	0.76	100	8.25	nw.	.....	
						250	985.9	5.2	.....	83	7.35	nw.	.....	
11:51	989.0	5.4	80	nw.	5.8	225	989.0	5.4	.....	80	7.18	nw.	5.8	3/10 A.Cu., nw.; 7/10 Nb., nw. Rain from 11:55 a. m. to 1:10 p. m.

November 21, 1918.

P. M.														
1:30	994.2	1.5	76	nw.	4.9	225	994.2	1.5	.....	76	5.18	nw.	4.9	10/10 St., nw.
						250	991.0	1.2	.....	77	5.13	nw.	5.3	
1:31	994.2	1.5	76	nw.	4.9	504	940.3	−1.5	1.03	84	4.53	nw.	9.4	Snow (moist) during entire flight.
						750	931.2	−3.0	.....	90	4.23	nw.	8.0	
						1,000	902.0	−4.6	.....	90	3.98	nw.	6.5	
2:32	994.4	1.6	74	nw.	8.0	1,144	885.8	−5.5	−0.62	100	3.84	nw.	5.7	
						1,250	873.6	−6.2	.....	99	3.53	nw.	5.9	Altitude of St. base about 1,200 m.
						1,500	846.3	−7.8	.....	96	3.02	nnw.	6.3	
3:48	994.8	1.1	82	nw.	5.4	1,725	822.2	−9.3	0.65	94	2.59	nnw.	6.6	
						1,750	819.5	−9.0	.....	92	2.61	nnw.	6.5	
						2,000	793.3	−5.8	.....	70	2.62	nnw.	6.1	
3:53	994.9	1.1	82	nw.	4.5	2,039	789.8	−5.3	−1.25	67	2.62	nnw.	6.0	
						2,000	793.3	−5.8	.....	70	2.62	nnw.	.....	
						1,750	819.5	−8.9	.....	89	2.55	nnw.	.....	
4:03	994.9	1.1	81	nw.	4.9	1,714	823.5	−9.3	0.62	92	2.59	nnw.	.....	
						1,500	846.3	−8.0	.....	91	2.91	nnw.	.....	
						1,250	874.0	−6.4	.....	90	3.42	nnw.	.....	
4:30	995.2	1.0	82	nw.	4.5	1,101	891.0	−5.5	0.60	97	3.72	nnw.	6.3	
						1,000	902.7	−4.8	.....	95	3.88	nnw.	7.0	
						750	931.9	−3.2	.....	89	4.17	nw.	8.8	
4:53	995.5	1.0	82	nw.	3.6	558	951.9	−1.9	0.87	84	4.38	nw.	10.2	
						500	961.7	−1.4	.....	84	4.57	nw.	9.0	
						250	992.3	0.8	.....	82	5.31	nw.	4.1	
5:04	995.6	1.0	82	nw.	3.6	225	995.6	1.0	.....	82	5.39	nw.	3.6	10/10 St., nw.

November 22, 1918.

P. M.														
1:40	999.0	3.8	60	n.	4.5	225	999.0	3.8	.....	60	4.31	n.	4.5	8/10 St.Cu., nw.
						250	995.7	3.5	.....	61	4.79	n.	.....	
1:49	999.0	4.2	57	n.	5.4	478	968.1	0.9	1.15	70	4.56	n.	.....	
						500	964.9	0.7	.....	70	4.50	n.	.....	
						750	935.0	− 1.8	.....	75	3.94	n.	.....	
						1,000	906.5	− 4.3	.....	79	3.37	nne.	.....	
						1,250	878.3	− 6.8	.....	83	2.86	nne.	.....	
2:29	999.1	5.0	54	nne.	4.9	1,281	875.1	− 7.1	1.00	84	2.81	nne.	.....	Altitude of St.Cu. base about 1,500 m.
						1,500	850.7	− 8.3	.....	82	2.48	nne.	.....	
						1,750	823.9	− 9.7	.....	79	2.11	n.	.....	
3:27	999.6	3.3	68	nne.	6.7	1,993	796.1	−11.0	0.55	77	1.82	n.	.....	
						2,000	796.0	−11.0	.....	77	1.82	n.	.....	
						2,250	772.0	−11.7	.....	78	1.74	nnw.	.....	9/10 St.Cu., nw.
4:01	1,000.0	2.5	65	n.	6.3	2,394	757.8	−12.1	0.35	79	1.70	nnw.	.....	
4:27	1,000.3	1.9	69	nne.	5.4	2,250	772.0	−11.5	.....	81	1.84	nnw.	.....	
						1,999	796.1	−10.4	0.39	84	2.11	nnw.	.....	
						1,750	824.0	− 9.4	.....	86	2.36	nnw.	.....	
						1,500	851.3	− 8.5	.....	88	2.60	nnw.	.....	
4:41	1,000.5	1.7	70	nne.	4.9	1,434	858.9	− 8.2	0.87	89	2.71	nnw.	.....	
						1,250	879.5	− 6.6	.....	84	2.94	n.	.....	
						1,000	908.0	− 4.4	.....	76	3.21	n.	.....	
						750	936.9	− 2.3	.....	69	3.48	nne.	.....	
5:10	1,000.7	1.3	72	nne.	3.1	744	937.8	− 2.2	0.62	69	3.51	nne.	.....	
						500	996.3	− 0.7	.....	70	4.03	nne.	.....	
						250	997.2	0.8	.....	72	4.66	nne.	.....	
5:18	1,000.7	1.0	72	nne.	3.1	225	1,000.7	1.0	.....	72	4.73	nne.	3.1	10/10 St.Cu., nw.

TABLE 18.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 23, 1918.

Time.	Surface. Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	At different heights above sea. Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
10:14	1,002.2	0.6	86	wnw.	5.8	225	1,002.2	0.6	.....	86	5.49	wnw.	5.8	8/10 St.Cu., w.
						250	998.9	0.3	.....	86	5.37	wnw.	5.8	
						500	967.8	−3.1	.....	85	4.00	wnw.	5.4	
10:37	1,002.0	0.8	86	wnw.	4.9	538	953.4	−3.6	1.34	85	3.84	wnw.	5.3	
						750	937.5	−5.1	.....	88	3.50	wnw.	6.8	
						1,000	907.8	−6.0	.....	92	3.14	wnw.	7.5	
11:20	1,001.5	0.4	92	wnw.	5.4	1,065	900.4	−7.4	0.72	93	3.03	wnw.	9.0	
						1,250	879.0	−8.1	.....	88	2.70	wnw.	9.0	Altitude of St.Cu. base about 1,100 m.
						1,500	851.1	−9.0	.....	81	2.30	wnw.	8.9	
11:48	1,001.1	0.3	92	wnw.	6.3	1,660	833.6	−9.6	0.37	77	2.07	wnw.	8.8	
						1,750	823.5	−7.7	.....	51	1.62	nw.	8.4	
P. M.														
12:45	1,000.8	0.3	69	wnw.	5.8	1,774	821.1	−7.2	−1.11	44	1.46	nw.	4.2	
						1,750	823.3	−7.2	.....	45	1.49	nw.	4.6	2/10 Cu., w.
						1,500	850.0	−7.5	.....	52	1.68	wnw.	8.6	
1:32	1,000.3	0.0	67	wnw.	7.2	1,328	869.2	−7.7	0.32	57	1.81	wnw.	11.3	
						1,250	877.7	−7.5	.....	61	1.97	wnw.	10.9	
						1,000	906.0	−6.7	.....	72	2.50	wnw.	9.6	
1:56	1,000.0	0.0	64	wnw.	6.7	750	935.7	−5.9	.....	83	3.08	wnw.	8.3	
						600	953.8	−5.4	1.44	90	3.49	wnw.	7.5	
						500	965.9	−4.0	.....	83	3.63	wnw.	7.3	
2:05	999.9	0.0	64	wnw.	6.7	250	996.8	−0.4	.....	66	3.90	wnw.	6.8	
						225	999.9	0.0	.....	64	3.91	wnw.	6.7	1/10 A.St., w.; 1/10 Cu., w.

November 24, 1918.

A. M.														
8:11	993.1	−4.8	88	wsw.	5.4	225	993.1	−4.8	.....	88	3.50	wsw.	5.4	4/10 A.St., w.
						250	990.0	−5.0	.....	88	3.53	wsw.	5.7	
						500	959.5	−6.9	.....	85	2.90	wsw.	8.5	
8:26	993.1	−4.9	86	wsw.	6.7	629	943.1	−7.9	0.77	84	2.62	wsw.	9.9	
						750	929.0	−8.6	.....	84	2.47	wsw.	9.2	Altitude of St.Cu. base about 1,050 m.
8:42	993.0	−4.8	89	wsw.	4.9	840	917.6	−9.2	0.62	84	2.34	wsw.	8.6	
						1,000	898.7	−8.0	.....	58	1.80	w.	7.0	3/10 Cl.St., w.; 2/10 St.Cu., w.
11:05	992.1	−2.7	72	wsw.	5.4	1,152	880.9	−6.9	−0.62	34	1.16	w.	5.5	
						1,000	898.3	−7.7	.....	54	1.72	w.	6.5	
11:47	991.7	−2.7	72	wsw.	5.8	808	920.3	−8.6	0.51	78	2.29	wsw.	7.6	
						750	927.6	−8.3	.....	79	2.39	wsw.	7.2	
						500	957.7	−7.0	.....	84	2.84	wsw.	5.7	
11:52	991.6	−2.4	68	wsw.	5.4	474	960.8	−6.9	0.20	84	2.86	wsw.	5.6	
						250	988.3	−2.5	.....	67	3.32	wsw.	5.8	
11:58	991.5	−2.0	65	wsw.	5.8	225	991.5	−2.0	.....	65	3.36	wsw.	5.8	5/10 A.St., w.; 2/10 Cu., w.

November 25, 1918.

A. M.														
9:20	992.3	−2.0	79	w.	5.8	225	992.3	−2.0	.....	79	4.08	w.	5.8	7/10 A.St., w.
						250	988.9	−2.3	.....	78	3.93	w.	6.3	
9:23	992.3	−2.0	79	w.	5.8	338	978.1	−3.2	1.66	75	3.51	w.	8.0	
						500	957.4	−3.2	.....	67	3.14	w.	8.9	
						750	927.9	−3.3	.....	58	2.55	w.	10.2	
						1,000	899.7	−3.4	.....	42	1.93	w.	11.6	
9:48	992.4	−1.4	88	w.	5.4	1,027	896.9	−3.4	0.03	41	1.89	w.	11.7	
						1,250	871.9	−3.2	.....	34	1.59	w.	12.4	
10:05	992.5	−0.2	69	wsw.	5.4	1,488	846.4	−2.9	−0.11	26	1.25	w.	13.1	
						1,500	845.1	−2.9	.....	26	1.25	w.	13.1	
						1,750	819.0	−3.4	.....	27	1.24	w.	12.2	
						2,000	793.6	−3.8	.....	29	1.29	w.	11.3	
10:38	992.8	0.6	62	wsw.	5.8	2,228	770.1	−4.2	0.17	30	1.29	w.	10.4	
						2,250	768.9	−4.2	.....	30	1.29	w.	10.4	
						2,500	744.7	−4.9	.....	31	1.26	w.	11.2	
						2,750	721.5	−5.6	.....	32	1.22	w.	11.9	
11:19	992.9	1.4	60	wsw.	5.8	2,872	710.6	−5.9	0.27	33	1.22	w.	12.3	
						3,000	698.9	−6.4	.....	35	1.25	w.	12.2	
						3,250	676.7	−7.4	.....	38	1.23	w.	12.1	
						3,500	655.4	−8.4	.....	42	1.26	w.	11.9	4/10 Cl., w.
11:44	992.9	2.2	50	wsw.	5.8	3,560	650.5	−8.6	0.50	43	1.26	w.	11.9	
						3,500	655.4	−8.5	.....	42	1.24	w.	11.9	
						3,250	676.7	−7.9	.....	39	1.22	w.	11.7	
						3,000	698.9	−7.4	.....	36	1.17	w.	11.6	
NOON.														
12:00	992.9	2.4	47	w.	5.4	2,826	714.2	−7.0	0.22	34	1.15	w.	11.5	
						2,750	721.5	−6.8	.....	34	1.17	w.	11.7	
						2,500	744.7	−6.3	.....	32	1.15	w.	12.4	
						2,250	768.9	−5.7	.....	31	1.17	w.	13.1	
P. M.														
12:15	992.8	2.4	49	w.	5.4	2,049	788.7	−5.3	0.35	30	1.17	w.	13.7	
						2,000	793.6	−5.1	.....	29	1.15	w.	13.4	
						1,750	819.0	−4.3	.....	26	1.11	w.	12.0	
12:30	992.7	2.8	40	w.	5.8	1,504	845.1	−3.4	0.14	22	1.01	w.	10.6	
						1,250	873.1	−3.0	.....	22	1.04	w.	10.9	
						1,000	901.0	−2.7	.....	22	1.07	w.	9.1	
12:44	992.6	3.3	37	w.	6.3	883	914.1	−2.5	0.41	22	1.09	w.	8.8	
						750	929.7	−2.0	.....	26	1.34	w.	8.5	
						500	959.4	−0.9	.....	34	1.93	w.	8.0	
12:58	992.5	2.9	37	w.	5.4	491	960.1	−0.9	1.47	34	1.93	w.	8.0	
						250	989.0	2.6	.....	39	2.87	w.	3.6	
1:05	992.5	3.0	40	w.	3.1	225	992.5	3.0	.....	40	3.03	w.	3.1	Few Cl., w.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 26, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:58	998.6	1.0	82	ese.	1.3	225	998.6	1.0	.....	82	5.39	ese.	1.3	2/10 St.Cu., sw.
						250	995.4	0.6	.....	83	5.30	ese.	2.8	
9:05	998.6	1.1	80	ese.	1.3	338	984.5	−0.9	1.68	85	4.82	ese.	8.2	
						500	964.7	−1.7	.....	84	4.45	ese.	6.6	
9:57	998.6	2.0	69	se.	1.3	679	943.3	−2.6	0.92	83	4.08	se.	4.9	
						500	964.7	−1.1	.....	81	4.51	se.	.....	
10:00	998.6	2.0	68	se.	1.3	374	980.3	0.0	0.85	79	4.83	se.	.....	
						250	995.4	1.7	.....	70	4.84	se.	.....	
10:02	998.6	2.0	68	se.	1.3	225	998.6	2.0	.....	68	4.80	se.	1.3	1/10 St.Cu., sw.

November 27, 1918.

A. M.														
8:22	993.0	−1.0	88	sw.	2.7	225	993.0	−1.0	.....	88	4.95	sw.	2.7	Cloudless.
						250	990.0	−0.7	.....	86	4.95	sw.	3.0	
8:40	993.1	−0.3	78	sw.	2.7	471	963.1	1.5	−1.02	64	4.36	sw.	5.9	
						500	959.7	1.4	.....	62	4.19	sw.	6.1	
						750	930.6	1.0	.....	48	3.15	wsw.	7.6	
9:29	993.3	1.9	68	sw.	3.6	882	915.5	0.7	0.19	41	2.64	wsw.	8.3	
						1,000	902.2	1.1	.....	37	2.45	wsw.	8.9	
9:55	993.5	3.3	51	sw.	3.1	1,207	879.8	1.7	−0.31	29	2.00	w.	9.9	
						1,250	875.0	1.7	.....	30	2.07	w.	10.0	
						1,500	848.4	1.7	.....	36	2.49	w.	10.5	
						1,750	822.5	1.7	.....	43	2.97	wsw.	11.0	
						2,000	797.5	1.7	.....	49	3.38	wsw.	11.5	
10:19	993.2	4.0	44	sw.	3.1	2,039	793.4	1.7	0.0	50	3.46	wsw.	11.6	
						2,250	772.8	1.3	.....	47	3.15	wsw.	10.5	
						2,500	749.0	0.9	.....	42	2.74	sw.	9.1	
11:05	992.4	4.9	49	sw.	2.2	2,572	740.3	0.7	0.18	41	2.64	sw.	8.6	
						2,750	725.9	0.1	.....	38	2.34	sw.	7.9	
						3,000	702.8	−0.8	.....	32	1.83	wsw.	6.7	
11:57	991.6	6.2	46	wsw.	3.6	3,055	698.1	−1.6	0.30	31	1.74	wsw.	6.5	
						3,000	702.8	−0.9	.....	32	1.81	wsw.	6.6	
						2,750	725.3	−0.3	.....	35	2.09	wsw.	7.3	
						2,500	748.2	0.3	.....	39	2.45	wsw.	7.9	
						2,250	771.7	0.9	.....	43	2.80	wsw.	8.5	
P. M.														
12:20	991.3	6.8	43	wsw.	3.6	2,101	785.9	1.3	0.11	45	3.02	wsw.	8.9	
						2,000	796.3	1.4	.....	47	3.18	wsw.	9.4	
						1,750	821.0	1.7	.....	53	3.66	wsw.	10.8	
						1,500	846.6	2.0	.....	59	4.17	sw.	12.1	
12:36	991.1	7.0	44	ssw.	4.0	1,384	859.0	2.1	0.17	62	4.41	sw.	12.7	
						1,250	873.3	2.3	.....	61	4.40	sw.	11.6	
						1,000	900.7	2.7	.....	60	4.45	sw.	9.5	
						750	929.0	3.2	.....	58	4.46	ssw.	7.4	
						500	958.3	3.6	.....	57	4.51	ssw.	5.4	
12:49	990.9	7.8	42	ssw.	3.6	481	960.4	3.6	1.68	57	4.51	ssw.	5.2	
						250	987.8	7.5	.....	43	4.46	ssw.	3.8	
12:52	990.9	7.9	41	ssw.	3.6	225	990.9	7.9	.....	41	4.37	ssw.	3.6	Cloudless.

November 29, 1918.

A. M.														
8:23	984.3	1.0	82	w.	7.2	225	984.3	1.0	.....	82	5.39	w.	7.2	4/10 A.Cu., w.
						250	981.0	0.7	.....	82	5.27	w.	7.5	
						500	951.0	−2.0	.....	86	4.45	w.	10.8	
8:27	984.4	1.0	82	w.	6.3	594	939.9	−3.0	1.08	88	4.18	w.	12.0	
						750	921.5	−1.5	.....	76	4.10	w.	14.1	
8:35	984.4	1.0	81	w.	7.6	837	911.6	−0.7	−0.95	69	3.97	w.	15.3	
						1,000	892.8	−2.2	.....	68	3.46	w.	15.1	
						1,250	865.5	−4.6	.....	72	2.99	w.	14.6	
8:58	984.7	1.4	76	w.	7.6	1,451	843.9	−6.5	0.94	73	2.58	w.	14.5	
						1,500	839.0	−6.6	.....	70	2.45	w.	14.3	
						1,750	812.9	−7.0	.....	54	1.83	wnw.	13.3	
						2,000	787.0	−7.5	.....	39	1.26	wnw.	12.6	
9:29	985.4	2.0	74	w.	7.2	2,008	786.2	−7.5	0.18	38	1.23	wnw.	12.6	
						2,250	762.0	−7.7	.....	34	1.08	wnw.	11.5	
						2,500	738.4	−7.9	.....	29	0.90	nw.	10.3	
10:06	986.1	3.0	66	wnw.	6.3	2,596	729.6	−8.0	0.09	27	0.84	nw.	9.9	
						2,750	715.5	−8.2	.....	23	0.70	nw.	.....	1/10 Fr.Cu., w.
						3,000	693.0	−8.5	.....	17	0.50	wnw.	.....	
11:29	986.6	4.8	62	wnw.	6.7	3,062	687.8	−8.6	0.12	15	0.44	wnw.	.....	
						3,000	693.0	−8.5	.....	15	0.44	wnw.	.....	
						2,750	716.8	−8.3	.....	15	0.45	wnw.	.....	
						2,500	740.0	−8.0	.....	15	0.46	w.	.....	
P. M.														
12:17	986.8	5.0	58	w.	8.0	2,250	763.7	−7.7	0.21	15	0.48	w.	10.5	
						2,000	788.4	−7.2	.....	18	0.60	w.	10.3	
						1,750	814.3	−6.7	.....	22	0.76	w.	10.0	
						1,500	840.9	−6.1	.....	25	0.91	w.	9.8	
12:40	986.8	5.0	56	w.	8.9	1,482	842.6	−6.1	0.34	25	0.91	w.	9.8	
						1,250	868.1	−5.3	.....	42	1.64	w.	11.1	
12:48	986.8	5.1	56	w.	8.0	1,095	885.2	−4.8	1.01	53	2.16	w.	12.0	
						1,000	895.9	−3.8	.....	56	2.49	w.	11.9	
						750	924.5	−1.3	.....	63	3.45	w.	11.5	
12:58	986.8	5.2	56	w.	9.4	618	939.9	0.0	1.32	67	4.09	w.	11.4	
						500	953.7	1.6	.....	64	4.39	w.	10.4	
						250	981.7	4.9	.....	57	4.94	w.	8.2	
1:06	986.9	5.2	56	w.	8.0	225	986.9	5.2	.....	56	4.96	w.	8.0	1/10 Cu., w.

TABLE 19.—*Free-air data from kite flights at Royal Center Aerological Station, November, 1918*—Continued.

November 30, 1918.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:08	990.8	−2.4	79	w.	3.6	225	990.8	− 2.4	.....	79	3.95	w.	3.6	Cloudless.
						250	987.5	− 2.6	.....	79	3.89	w.	4.3	
						500	956.7	− 4.8	.....	75	3.06	wnw.	10.5	
8:15	990.8	−2.4	73	w.	3.1	606	944.0	− 5.7	0.87	73	2.76	nw.	13.2	
8:18	990.8	−2.3	74	w.	3.1	617	942.6	− 4.9	−7.27	62	2.51	nw.	14.6	
						750	927.0	− 5.3	.....	59	2.31	nw.	14.1	
8:27	990.8	−2.0	71	w.	2.7	1,000	898.3	− 6.1	.....	53	1.93	nw.	13.2	
						1,065	890.5	− 6.3	0.32	51	1.83	nw.	13.0	
						1,250	870.0	− 6.5	.....	46	1.62	nw.	.....	
						1,500	842.4	− 6.9	.....	39	1.33	nw.	.....	
8:47	990.8	−1.8	71	w.	3.1	1,710	819.9	− 7.1	0.12	35	1.17	nw.	.....	
						1,750	815.5	− 7.2	.....	35	1.16	nw.	.....	
						2,000	790.0	− 8.1	.....	36	1.11	nw.	.....	
						2,250	765.4	− 8.9	.....	38	1.09	nw.	.....	
9:06	990.8	−1.0	61	w.	3.6	2,340	756.3	− 9.2	0.33	38	1.06	nw.	.....	
						2,500	740.8	−10.2	.....	40	1.07	nw.	.....	
9:33	991.0	−0.6	51	w.	3.6	2,641	727.2	−11.0	0.37	42	1.00	nw.	.....	Few Fr.Cu., w.
						2,500	740.8	−10.8	.....	45	1.09	nw.	.....	
						2,250	765.4	−10.4	.....	51	1.28	nw.	.....	
10:02	991.2	0.0	64	w.	4.5	2,104	779.9	−10.2	−0.06	54	1.38	nw.	13.3	
						2,250	765.4	−10.3	.....	54	1.37	nw.	.....	
10:09	991.1	0.1	65	w.	4.0	2,426	747.8	−10.4	0.17	54	1.36	nw.	.....	
						2,250	765.4	−10.1	.....	57	1.46	nw.	.....	
						2,000	790.0	− 9.7	.....	61	1.63	nw.	.....	
10:43	990.9	1.0	59	w.	3.6	1,786	812.4	− 9.3	0.54	64	1.77	nw.	14.8	
						1,750	816.1	− 9.1	.....	63	1.77	nw.	14.7	
						1,500	842.8	− 7.8	.....	59	1.86	nw.	13.8	
10:58	990.8	1.0	59	w.	4.9	1,304	864.4	− 6.7	0.58	56	1.94	nw.	13.1	
						1,250	870.0	− 6.4	.....	56	1.99	nw.	12.9	
						1,000	898.3	− 5.0	.....	54	2.17	wnw.	12.1	
11:10	990.6	1.3	55	w.	4.9	873	913.0	− 4.2	−0.04	53	2.28	wnw.	11.7	
11:12	990.6	1.3	54	w.	5.4	781	923.7	− 4.6	1.15	60	2.49	w.	9.1	
						750	927.0	− 4.3	.....	60	2.56	w.	8.9	
						500	956.7	− 1.4	.....	56	3.05	w.	7.4	
						250	987.4	1.5	.....	52	3.54	w.	5.9	
11:26	990.4	1.8	52	w.	5.8	225	990.4	1.8	.....	52	3.62	w.	5.8	Cloudless.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918.*

December 1, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
1:14	985.9	5.0	66	s.	4.0	225	985.9	5.0	.....	66	5.76	s.	4.0	2/10 Cl.Cu., w.; 2/10 Cl.St., w.; 4/10 A.Cu., w.
						250	982.5	4.7	.....	66	5.64	s.	5.2	
						500	952.6	1.8	.....	65	4.52	s.	17.7	2/10 Cl.St., w.; 8/10 A.Cu., w.
1:21	985.8	5.0	62	s.	4.9	564	945.3	1.2	1.14	65	4.33	s.	20.3	
						750	923.4	0.7	.....	59	3.79	ssw.	19.7	
						1,000	895.0	0.0	.....	51	3.12	sw.	18.9	
1:32	985.6	4.9	63	s.	4.0	1,078	886.7	−0.2	0.27	49	2.94	sw.	18.7	
						1,250	867.3	−1.1	.....	46	2.56	wsw.	18.3	
						1,500	840.5	−2.4	.....	43	2.15	w.	17.6	
1:46	985.3	5.0	63	s.	4.5	1,621	827.8	−3.0	0.52	41	1.95	w.	17.3	
						1,750	814.3	−3.6	.....	44	1.99	w.	.....	
						2,000	789.0	−4.8	.....	49	2.00	w.	.....	2/10 Cl.St., w.; 8/10 A.Cu., w.
1:59	985.1	5.0	64	s.	4.0	2,123	*776.6	−5.4	0.48	52	2.02	w.	.....	

December 2, 1918.

A. M.														
7:48	986.0	−2.0	83	w.	5.8	225	986.0	− 2.0	.....	83	4.29	w.	5.8	5/10 St.Cu., w.
						250	982.5	− 2.3	.....	84	4.23	w.	6.1	
						500	952.2	− 4.9	.....	91	3.69	wsw.	8.6	
7:55	986.1	−2.0	83	wsw.	5.8	556	945.7	− 5.5	1.06	93	3.57	wsw.	9.2	Altitude of St.Cu. base about 550 m.
8:05	986.1	−2.0	82	wsw.	6.7	737	924.0	− 7.2	0.94	100	4.24	wsw.	8.4	
						750	922.4	− 5.8	.....	97	3.64	wsw.	8.4	
8:18	986.1	−1.9	79	wsw.	7.6	955	898.9	− 1.0	−2.84	51	2.87	wsw.	8.5	
						1,000	893.3	− 1.3	.....	51	2.79	wsw.	8.7	
						1,250	865.5	− 3.0	.....	50	2.38	wsw.	9.8	
						1,500	839.0	− 4.7	.....	49	2.02	w.	10.9	
8:27	985.1	−1.8	75	wsw.	8.5	1,581	830.5	− 5.3	0.69	49	1.92	w.	11.2	
						1,750	812.6	− 6.1	.....	50	1.82	w.	11.7	10/10 St.Cu., wsw.
						2,000	787.0	− 7.4	.....	53	1.73	w.	12.5	
						2,250	762.5	− 8.6	.....	54	1.59	w.	13.2	
8:49	986.1	−1.5	71	wsw.	6.7	2,312	753.4	− 9.1	0.50	55	1.55	w.	13.5	
						2,500	737.9	−10.0	.....	55	1.43	w.	.....	
						2,750	714.5	−11.3	.....	55	1.27	w.	.....	
						3,000	691.7	−12.7	.....	55	1.12	w.	.....	
9:07	986.1	−1.4	71	wsw.	6.7	3,020	689.8	−12.8	0.55	55	1.11	w.	.....	
						3,250	669.2	−13.8	.....	53	0.98	w.	.....	1/10 St.Cu., w.
9:31	986.3	−1.5	71	wsw.	4.0	3,497	647.5	−14.7	0.27	51	0.87	w.	.....	
						3,250	668.8	−14.4	.....	53	0.92	w.	.....	
						3,000	691.0	−14.0	.....	56	1.01	wsw.	.....	
10:14	986.5	0.0	64	wsw.	7.2	2,858	704.0	−13.8	0.43	57	1.05	wsw.	.....	
						2,750	714.0	−13.3	.....	60	1.16	wsw.	.....	
						* 2,500	737.9	−12.3	.....	66	1.39	wsw.	.....	
						2,250	762.5	−11.2	.....	73	1.70	wsw.	.....	
10:41	986.7	1.0	76	wsw.	6.3	2,233	764.4	−11.1	0.53	73	1.72	wsw.	12.1	
						2,000	787.7	− 9.9	.....	77	2.02	wsw.	11.2	
10:55	986.8	1.0	82	wsw.	8.5	1,853	803.0	− 9.1	0.77	80	2.25	wsw.	10.6	
						1,750	813.7	− 8.3	.....	81	2.44	wsw.	10.5	
						1,500	840.5	− 6.4	.....	82	2.92	wsw.	10.0	
						1,250	867.2	− 4.5	.....	84	3.52	wsw.	9.7	
11:07	985.8	1.0	82	wsw.	7.6	1,086	885.7	− 3.2	0.69	85	3.86	wsw.	9.4	
						1,000	895.2	− 2.6	.....	81	3.99	wsw.	8.8	
11:14	985.9	1.0	82	wsw.	8.0	853	912.0	− 1.7	−1.26	73	3.87	wsw.	7.9	
						750	924.0	− 3.0	.....	73	3.47	wsw.	7.4	
11:16	986.9	1.0	82	wsw.	8.0	715	928.1	− 3.4	0.90	73	3.36	wsw.	7.2	
						500	953.2	− 1.5	.....	77	4.15	wsw.	6.4	
						250	983.5	0.8	.....	82	5.31	wsw.	5.5	
11:31	987.0	1.0	82	wsw.	5.4	225	987.0	1.0	.....	82	5.39	wsw.	5.4	9/10 St.Cu., w.

December 3, 1918.

A. M.														
7:58	977.3	3.8	74	sw.	7.2	225	977.3	3.8	.....	74	5.93	sw.	7.2	10/10 A.St., wsw.
						250	974.0	3.6	.....	74	5.85	.....	7.9	
						500	944.5	2.3	.....	79	5.70	.....	14.8	
8:09	977.3	3.8	74	sw.	4.0	588	934.5	1.8	0.55	80	5.57	.....	17.2	
						750	916.0	0.9	.....	81	5.28	.....	17.3	
8:40	977.5	4.6	77	wsw.	4.0	945	894.2	0.3	0.42	83	5.18	w.	17.5	
						1,000	888.2	−0.1	.....	83	5.03	w.	17.6	
						1,250	860.5	−1.8	.....	81	4.26	w.	17.9	
						1,500	833.1	−3.8	.....	79	3.51	w.	18.1	
8:56	977.6	5.0	72	w.	7.6	1,715	810.4	−5.0	0.69	78	3.13	w.	18.4	
						1,750	806.8	−5.2	.....	75	2.96	w.	18.7	
						2,000	781.7	−6.2	.....	52	1.88	w.	20.5	Altitude of Cu. base about 1,900 m.
9:22	977.6	5.7	71	w.	10.3	2,196	762.9	−7.1	0.59	34	1.14	w.	22.0	
						2,000	782.8	−5.6	.....	42	1.60	w.	.....	6/10 Cu., w.
10:15	977.5	6.7	66	w.	11.2	†1,795	804.1	−4.1	.....	51	2.21	w.	(†)	8/10 Cu., w.

December 4, 1918.

A. M.														
8:05	990.9	−4.0	86	w.	4.5	225	990.9	− 4.0	.....	86	3.76	w.	4.5	Cloudless.
						250	987.5	− 4.2	.....	86	3.70	w.	4.8	
						500	956.8	− 6.0	.....	92	3.39	wnw.	8.2	
8:10	990.9	−4.0	86	w.	5.4	619	942.4	− 6.8	0.71	95	3.27	wnw.	9.8	
						750	926.5	− 7.0	.....	93	3.14	wnw.	10.4	8/10 St.Cu., nw.
						1,000	897.5	− 7.5	.....	86	2.78	nw.	11.6	Altitude of St.Cu. base about 700 m.
8:23	991.1	−3.6	86	w.	6.3	1,193	875.8	− 7.8	0.17	85	2.68	nw.	12.5	
						1,250	869.3	− 6.7	.....	73	2.53	nw.	13.6	

*Clock cylinder became loose and record was lost for remainder of flight.

†Cylinder loose.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 4, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
8:33	991.2	−3.5	86	w.	6.3	1,334	860.2	− 5.0	−1.99	55	2.21	nnw.	15.3	
						1,500	842.0	− 6.1		54	1.97	nnw.		
						1,750	815.4	− 7.9		53	1.65	nnw.		
						2,000	789.7	− 9.6		52	1.40	nnw.		
8:50	991.4	−3.4	87	w.	8.0	2,063	783.3	−10.0	0.69	52	1.35	nnw.		
						2,250	764.5	−11.0		52	1.23	nnw.		
						2,500	740.0	−11.7		51	1.14	nw.		
9:34	991.9	−3.0	87	wnw.	7.2	2,720	719.5	−13.4	0.51	50	0.96	nw.		10/10 St.Cu., nw.
						2,500	740.0	−12.3		59	1.24	nw.		
						2,250	765.2	−11.0		69	1.64	nw.		
10:14	992.3	−3.0	87	wnw.	8.0	2,244	765.9	−11.0	0.67	69	1.64	nw.	7.0	
						2,000	790.4	− 9.4		71	1.95	nw.	10.3	
						1,750	816.3	− 7.7		73	2.32	wnw.	13.7	
10:45	992.4	−2.8	82	wnw.	8.0	1,555	837.2	− 6.4	0.67	74	2.63	wnw.	16.3	
						1,500	843.0	− 6.0		72	2.65	wnw.	16.0	
						1,250	870.5	− 4.4		62	2.62	wnw.	14.4	
11:00	992.5	−2.8	82	w.	3.6	1,134	883.6	− 3.6	−1.58	60	2.71	wnw.	13.7	
11:02	992.5	−2.8	81	w.	3.6	1,098	887.6	− 9.3	0.54	71	1.96	wnw.	12.8	
						1,000	899.0	− 8.8		78	2.25	wnw.	12.4	
11:13	992.5	−2.6	78	w.	7.6	746	928.8	− 7.4	0.92	95	3.10	wnw.	11.3	
						500	958.6	− 5.2		87	3.43	wnw.	9.4	
						250	989.3	− 2.8		79	3.82	w.	7.4	
11:23	992.5	−2.6	78	w.	7.2	225	992.5	− 2.6		78	3.84	w.	7.2	10/10 St.Cu., nw.

December 5, 1918.

A. M.														
7:48	991.5	−2.4	87	s.	3.6	225	991.5	−2.4		87	4.35	s.	3.6	8/10 St., w.
						250	988.1	−2.1		83	4.26	s.	4.9	
7:53	991.4	−2.2	87	s.	3.6	403	969.5	1.4	−1.37	39	2.64	sse.	18.0	
						500	957.7	1.0		34	2.23	sse.	18.0	
8:03	991.2	−2.0	87	s.	4.0	701	934.0	0.3	0.37	25	1.56	s.	18.0	
						750	928.0	0.4		26	1.64	s.	18.3	
						1,000	879.5	0.6		31	1.98	ssw.	20.0	
8:12	991.0	−1.6	88	sse.	4.9	1,156	852.6	0.8	−0.11	34	2.20	ssw.	21.0	
						1,250	872.1	0.1		42	2.58	ssw.	20.4	
8:28	990.7	−1.0	80	sse.	3.6	1,456	849.9	−1.5	0.77	59	3.18	sw.	19.0	
						1,500	845.3	−1.3		58	3.18	sw.	19.2	
						1,750	819.2	−0.1		52	3.15	wsw.	20.4	
						2,000	794.0	1.1		46	3.05	w.	21.5	
8:37	990.6	−0.6	79	sse.	4.0	2,058	788.3	1.4	−0.46	45	3.04	w.	21.8	
						2,000	794.0	1.1		47	3.11	w.	22.1	
						1,750	820.0	0.0		56	3.42	wnw.	23.4	
9:07	990.0	0.0	72	sse.	6.3	1,588	840.2	−0.7	0.30	61	3.51	wnw.	24.3	10/10 A.St., w.
						1,500	846.0	−0.4		61	3.61	wnw.	24.2	
						1,250	872.1	0.3		59	3.68	w.	23.8	
						1,000	899.5	1.1		58	3.84	wsw.	23.4	
						750	*928.0	1.8		57	3.97	sw.	23.0	
9:46	989.1	1.0	66	sse.	6.3	634	941.0	2.2	−0.25	56	4.01	sw.	22.8	
						500	956.5	−1.1		56	3.12	ssw.	21.0	
9:50	989.0	1.0	66	sse.	6.3	484	958.2	−1.5	1.08	56	3.02	ssw.	20.8	
						250	985.8	0.9		61	3.98	sse.	6.4	
10:00	988.8	1.2	62	sse.	4.9	225	988.8	1.2		62	3.84	sse.	4.9	5/10 A.St., w.; 3/10 A.Cu., w.

December 6, 1918.

A. M.														
8:12	998.0	1.0	76	nw.	8.5	225	998.0	1.0		76	4.99	nw.	8.5	2/10 A.St., nw.
						250	995.0	0.8		76	4.92	nw.	9.1	
						500	964.3	−1.5		80	4.31	nnw.	14.6	
8:18	998.0	1.4	75	nw.	8.0	549	958.3	−2.0	0.93	81	4.19	nnw.	15.7	
						750	934.0	−3.7		87	3.90	nnw.	15.0	
						1,000	905.0	−5.8		93	3.56	nw.	14.1	
8:56	998.3	2.6	63	nnw.	8.9	1,158	887.4	−7.2	0.85	100	3.32	nw.	13.5	
						1,250	877.2	−4.8		66	2.69	nw.	14.8	
9:03	998.3	2.8	63	n.	8.5	1,336	867.6	−2.6	−2.58	35	1.72	nw.	16.0	
						1,500	850.0	−3.3		27	1.25	wnw.	18.9	3/10 Cu., n.
9:17	998.5	3.0	57	n.	9.8	1,738	824.6	−4.4	0.45	16	0.68	w.	23.0	
						1,750	823.5	−4.3		13	0.55	w.	23.0	
						2,000	797.8	−2.4		10	0.50	nw.	23.9	
9:29	998.6	3.0	55	nnw.	11.2	2,017	796.1	−2.3	−0.42	10	0.50	nw.	24.0	
						2,000	797.8	−2.3		10	0.50	nw.	22.0	Altitude of Cu. base about 2,150 m.
						1,750	823.5	−2.5		9	0.45	nw.	21.1	
						1,500	850.2	−2.8		8	0.38	nw.	18.5	
9:55	998.9	3.8	55	w.	4.9	1,399	861.1	−2.9	−0.58	8	0.38	nw.	17.4	
						1,250	877.9	−3.8		8	0.36	nw.		
						1,000	906.0	−5.2		7	0.28	n.		
10:03	999.0	3.8	55	w.	6.3	882	919.7	−5.9	1.19	7	0.26	n.		
						750	935.4	−4.3		25	1.06	n.		
10:11	999.1	3.8	59	nw.	10.3	579	956.0	−2.3	1.89	49	2.47	n.		
						500	965.6	−0.8		51	2.91	n.		
						250	996.0	3.9		56	4.52	nnw.		
10:18	999.1	4.0	57	nnw.	11.2	225	999.1	4.0		57	4.63	nnw.	11.2	7/10 Cu., nw.

*Clock cylinder became loose and pressure record was lost; altitudes obtained from angles.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 7, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.														
8:22	987.1	4.7	76	s.	4.0	225	987.1	4.7	.....	76	6.49	s.	4.0	7/10 Cl.St., w.
						250	984.3	4.8	.....	77	6.62	s.	5.0	
						500	955.0	6.3	.....	91	8.60	sw.	15.6	
8:27	987.1	4.8	75	ssw.	3.6	561	947.5	6.7	−0.60	94	9.22	wsw.	17.8	3/10 Cl.Cu., w.; 4/10 Cl.St., w.
8:56	987.1	5.6	73	ssw.	5.4	750	926.0	7.4	.....	88	9.06	wsw.	15.7	
						995	899.0	8.4	−0.39	81	8.93	sw.	13.0	
						*1,250	.....	7.2	.....	80	8.13	sw.	16.7	
						*1,500	.....	6.1	.....	78	7.35	sw.	20.2	
9:17	987.0	6.2	70	ssw.	4.5	*1,524	.....	6.0	0.45	78	7.29	sw.	20.6	
						*1,750	.....	5.3	.....	66	5.88	sw.	20.7	
						*2,000	.....	4.6	.....	53	4.49	sw.	20.7	7/10 Cl.St., w.
						*2,250	.....	3.9	.....	39	3.15	wsw.	20.8	
						*2,500	.....	3.1	.....	26	1.98	wsw.	20.9	
						*2,750	.....	2.4	.....	12	0.87	wsw.	21.0	
10:14	986.6	8.1	70	sw.	5.4	*2,812	.....	2.2	0.46	9	0.64	wsw.	21.0	
						*2,750	.....	2.7	.....	9	0.67	wsw.	20.9	
						*2,500	.....	4.2	.....	7	0.58	wsw.	20.3	
						*2,250	.....	5.7	.....	6	0.55	wsw.	19.8	
10:52	986.2	8.8	69	sw.	4.0	*2,051	.....	7.0	−0.44	5	0.50	wsw.	19.4	
						*2,000	.....	6.8	.....	14	1.38	wsw.	19.5	
						*1,750	.....	5.7	.....	59	5.40	sw.	20.0	
11:12	985.9	8.9	68	sw.	5.4	*1,524	.....	4.7	0.39	99	8.45	sw.	20.4	
						*1,500	.....	4.8	.....	98	8.43	sw.	20.1	
						*1,250	.....	5.8	.....	92	8.48	sw.	17.2	
						*1,000	.....	6.8	.....	86	8.50	sw.	14.1	
						*750	.....	7.7	.....	81	8.51	sw.	11.2	
						*500	.....	8.6	.....	75	8.38	sw.	8.2	
						*250	.....	9.7	.....	69	8.30	sw.	5.2	
11:48	985.3	9.8	68	sw.	4.9	225	985.3	9.8	.....	68	8.24	sw.	4.9	7/10 Cl.St., w.

December 8, 1918.

A. M.														
7:42	985.5	7.4	94	w.	3.6	225	985.5	7.4	.....	94	9.68	w.	3.6	10/10 A.St., w.
						250	982.5	7.2	.....	93	9.45	w.	4.0	
						500	953.3	5.5	.....	87	7.86	nw.	7.7	
7:49	985.6	7.4	94	w.	3.6	564	945.8	5.1	0.68	85	7.47	nw.	8.6	
						750	924.8	6.9	.....	67	6.67	wnw.	9.7	
8:05	985.8	7.4	94	w.	3.6	970	900.6	11.3	−1.53	23	3.08	wnw.	11.0	
						1,000	897.4	11.1	.....	21	2.77	wnw.	11.3	
8:16	986.0	7.4	94	w.	3.1	1,209	875.2	9.7	0.67	6	0.72	w.	13.4	
						1,250	871.0	9.6	.....	6	0.72	w.	13.5	
						1,500	845.1	8.7	.....	5	0.56	w.	14.5	
						1,750	820.0	7.8	.....	3	0.32	wnw.	15.4	
						2,000	795.8	6.9	.....	2	0.20	wnw.	16.3	
8:37	986.2	7.4	92	w.	3.6	2,248	771.7	6.0	0.36	1	0.09	wnw.	17.2	
						2,500	.....	4.5	.....	1	0.08	wnw.	17.6	
						2,750	.....	3.0	.....	1	0.08	wnw.	18.0	
						3,000	.....	1.4	.....	1	0.07	wnw.	18.4	
						3,250	.....	−0.1	.....	1	0.06	wnw.	18.8	
						3,500	.....	−1.6	.....	1	0.05	wnw.	19.2	
9:18	986.4	8.0	87	w.	3.1	†3,518	.....	−1.7	0.61	1	0.05	wnw.	19.2	10/10 A.Cu., w.

December 11, 1918.

A. M.														
9:08	993.9	4.0	75	wsw.	5.8	225	993.9	4.0	.....	75	6.10	wsw.	5.8	Cloudless.
						250	990.8	3.7	.....	75	5.97	wsw.	6.1	1/10 St.Cu., wsw.
						500	960.7	0.4	.....	80	5.03	wsw.	8.6	
9:21	993.9	4.0	75	wsw.	6.3	535	956.4	−0.1	1.32	81	4.91	wsw.	9.0	
						750	931.3	−0.3	.....	62	3.70	w.	13.0	Altitude of St.Cu. base about 1,150 m.
						1,000	902.8	−0.6	.....	40	2.32	wnw.	17.6	
9:43	993.9	4.5	78	wsw.	5.8	1,143	886.6	−0.8	0.12	27	1.54	wnw.	20.2	
						1,250	875.0	−1.1	.....	21	1.17	wnw.	20.1	
						1,500	848.0	−1.7	.....	7	0.37	wnw.	19.8	
9:55	993.9	4.8	75	wsw.	6.3	1,513	846.3	−1.7	0.24	6	0.32	wnw.	19.8	
						1,750	821.4	−3.0	.....	5	0.24	w.	20.8	
						2,000	795.5	−4.4	.....	4	0.17	wsw.	22.0	
10:10	993.8	4.8	75	wsw.	6.7	2,096	785.8	−4.9	0.55	3	0.12	wsw.	22.4	
						2,250	770.5	−5.2	.....	3	0.12	wsw.	24.8	
						2,500	746.6	−5.6	.....	2	0.08	wsw.	28.7	
						2,750	723.0	−6.0	.....	1	0.04	wsw.	32.6	
10:30	993.7	5.2	72	wsw.	5.8	‡2,784	720.0	−6.1	0.17	1	0.04	wsw.	33.2	Few Cl.Cu., w.

December 12, 1918.

A. M.														
9:00	999.6	1.4	79	se.	2.7	225	999.6	1.4	.....	79	5.34	se.	2.7	10/10 A.St., sw.
						250	996.4	2.0	.....	73	5.15	se.	3.0	
9:14	999.6	1.8	80	se.	3.1	383	992.8	4.8	−2.46	48	4.13	se.	4.6	
						500	966.0	4.7	.....	31	2.65	sse.	4.2	
10:55	998.7	4.4	65	se.	2.2	719	940.0	4.7	0.03	22	1.88	sse.	4.0	
						750	936.0	4.7	.....	23	1.96	sse.	4.0	
						1,000	906.8	4.3	.....	31	2.58	s.	3.7	

*Pressure pen failed to record; altitudes obtained from angles. † Altitude computed from angle; pressure pen failed to record. ‡ Pressure pen failed to record.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 12, 1918—Continued.

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
12:53	997.0	6.0	60	se.	5.8	1,132	892.1	4.1	0.15	34	2.78	s.	3.5	10/10 St., w.
						1,250	879.0	2.8		39	2.91	s.	3.5	
						1,500	852.5	0.1		49	3.01	ssw.	3.4	
1:23	996.9	6.0	58	se.	8.9	1,577	844.2	−0.8	1.36	52	2.97	ssw.	3.4	
						1,500	852.5	0.5		53	3.35	ssw.	4.5	
1:39	996.9	6.0	60	se.	4.0	1,398	863.4	2.1	0.75	53	3.77	s.	5.9	
						1,250	879.0	3.2		52	4.00	s.	6.4	
						1,000	906.8	5.1		50	4.40	s.	7.2	
1:50	996.9	5.8	63	se.	6.3	956	911.8	5.4	0.71	50	4.48	s.	7.3	
						750	935.0	6.9		44	4.38	s.	7.7	
1:57	996.9	5.9	63	se.	5.8	633	948.2	7.7	−1.20	40	4.20	s.	8.0	
						500	964.0	6.0		45	4.21	s.	8.5	
2:05	996.9	5.8	63	se.	6.3	400	975.8	4.7	0.74	48	4.10	s.	8.9	
						250	994.0	5.8		58	5.35	se.	7.0	
2:09	996.9	6.0	60	se.	6.7	225	996.9	6.0		60	5.61	se.	6.7	10/10 St., sw.
December 14, 1918.														
A. M.														
10:42	934.8	4.8	89	nnw.	6.7	225	934.8	4.8		89	7.65	nnw.	6.7	10/10 St.Cu., nw
						250	931.7	4.6		90	7.63	nnw.	6.8	
						500	950.0	2.2		96	6.87	nnw.	7.7	
10:54	934.7	4.8	89	nnw.	6.7	553	943.1	1.7	0.95	97	6.70	nnw.	7.9	
						750	921.0	1.7		92	6.36	nnw.	8.0	Altitude of St.Cu. base about 450 m.
						1,000	893.6	1.7		88	6.03	nnw.	8.1	
11:34	934.7	4.4	91	nnw.	6.7	1,239	868.8	1.7	0.00	79	5.46	nnw.	8.3	
						1,250	867.5	1.7		79	5.46	nnw.	8.2	
						1,500	841.2	1.5		71	4.84	nnw.	6.1	
P. M.														
12:55	935.1	4.3	91	nnw.	6.3	1,566	834.3	1.5	0.06	69	4.70	nnw.	5.5	
						1,500	841.2	1.5		70	4.77	nnw.	6.4	
						1,250	867.5	1.7		73	5.04	nnw.	9.8	
1:12	935.2	4.5	91	nnw.	8.0	1,240	868.8	1.7	−0.56	73	5.04	nnw.	9.9	
						1,000	894.9	0.4		84	5.28	nnw.	10 9	
1:24	935.4	4.4	91	nnw.	7.8	919	904 1	−0.1	0.42	88	5.33	nnw.	11.2	
						750	923.2	1.6		88	6.04	nnw.	11.5	
						500	952.5	1.7		89	6.15	nnw.	11.9	
1:35	935.5	4.6	92	nnw.	7.2	489	954.0	1.7	1.06	89	6.15	nnw.	11.9	
						250	983.0	4.2		91	7.51	nnw.	7.2	
1:52	935.7	4.5	91	nnw.	6.7	225	935.7	4.5		91	7.66	nnw.	6.7	10/10 St.Cu., nw.
December 17, 1918.														
A. M.														
8:26	1,035.9	1.4	82	ese.	5.4	225	1,035.9	1.4		82	5.54	ese.	5.4	1/10 Cl., w.; 6/10 Cl.St., w.
						250	1,032.5	1.7		79	5.46	ese.	5.8	Solar halo from 7:58 to 8:40 a. m.
8:33	1,035.9	1.4	82	ese.	4.0	461	977.0	3.8	−1.02	49	3.93	ese.	9.0	
						500	972.2	3.9		48	3.88	ese.	8.8	5/10 Cl., w.; 2/10 Cl.St., w.
						750	943.0	4.8		38	3.27	ese.	7.4	
						1,000	914.4	5.6		29	2.64	e.	6.1	
10:43	1,035.8	4.5	76	ese.	6.3	1,178	894.7	6.3	−0.35	22	2.10	e.	5.0	
						1,000	914.4	5.7		19	1.74	e.	4.7	
10:54	1,035.7	4.4	77	ese.	6.7	759	941.6	4.8	−1.03	14	1.20	e.	4.2	
						750	942.8	4.7		15	1.28	e.	4.2	
						500	972.0	2.1		34	2.42	ese.	3.9	Solar halo from 11:00 to 11:20 a. m.
11:14	1,035.6	5.1	74	ese.	5.4	449	979.3	1.5	1.64	39	2.66	ese.	3.8	
						250	1,002.0	4.7		68	5.81	ese.	5.2	
11:17	1,035.5	5.1	72	ese.	5.4	225	1,005.5	5.1		72	6.33	ese.	5.4	2/10 Cl., w.; 6/10 Cl.St., w.
December 18, 1918, series (No. 1).														
A. M.														
8:08	1,036.1	−0.2	100	e.	4.9	225	1,036.1	−0.2		100	5.53	e.	4.9	10/10 St., e
						250	1,033.0	−0.4		98	5.79	e.	5.6	Light fog from Dna. to 11:00 a. m.
8:46	1,036.3	−0.1	100	e.	6.3	371	988.0	−1.6	0.96	91	4.87	ese.	9.0	
						500	972.0	1.2		67	4.46	ese.	9.2	
						750	942.4	6.8		19	1.88	se.	9.7	
9:09	1,036.4	−0.1	100	e.	5.8	847	931.8	8.9	−2.21	1	0.11	se.	9.9	
						1,000	914.0	8.3		1	0.11	se.	9.6	
						1,250	886.9	7.3		1	0.10	sse.	9.0	
						1,500	860.5	6.3		1	0.10	sse.	8.5	
9:49	1,036.2	0.3	94	e.	5.4	1,558	854.6	6.1	0.39	1	0.09	sse.	8.4	
						1,750	834.4	4.7		1	0.09	sse.	8.3	
						2,000	809.0	2.8		1	0.07	s.	8.1	2/10 A.Cu., w.; 8/10 St., e.
10:30	1,035.6	1.7	84	e.	3.6	2,097	799.4	2.1	0.74	1	0.07	s.	8.0	
						2,250	784 2	1.2		1	0.07	s.	8.9	
						2,500	760.3	−1.2		1	0.06	s.	10.4	
						2,750	736.9	−1.6		1	0.05	s.	11.8	
10:57	1,035.2	3.2	82	e.	3.1	2,758	736.3	−1.7	0.61	1	0.05	s.	11.9	
						2,750	736.9	−1.3		1	0.05	s.	11.6	
						2,500	760.3	−0.1		1	0.06	s.	10.7	
						2,250	784.2	1.5		1	0.07	s.	9.6	
						2,000	809.0	3.2		1	0.08	s.	8.4	
11:21	1,034.9	4.2	79	e.	4.5	1,753	834.2	4.7	0.57	1	0.09	s.	7.3	
						1,500	860.5	6.1		1	0.09	s.	8.2	
						1,250	886.9	7.6		1	0.10	sse.	9.1	

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 18, 1918, series. (No. 1)—Continued.

Surface.						At different heights above sea.									
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	
11:33	1,004.7	5.0	75	e.	4.5	1,228	889.5	7.7	0.32	1	0.11	sse.	9.2	
						1,000	914.0	8.4	.....	1	0.11	se.	10.5	
11:40	1,004.6	5.1	72	e.	4.9	822	934.1	9.0	−0.70	1	0.11	se.	11.5	
						750	942.4	8.5	.....	11	1.22	se.	10.6	
						500	972.0	6.7	.....	43	4.22	ese.	7.4	
						250	1,001.5	5.0	.....	76	6.63	e.	4.3	
11:54	1,004.5	4.8	79	e.	4.0	225	1,004.5	4.8	.....	79	6.79	e.	4.0	2/10 Cl., w.; 3/10 Cl.St., w.; 1/10 Cl.Cu., w.
December 18, 1918, series (No. 2).														
P. M.														
12:48	1,003.9	6.4	73	e.	6.3	225	1,003.9	6.4	.....	73	7.02	e.	6.3	2/10 Cl., w.; 3/10 Cl.St., w.; 1/10 Cl. cu., w.
						250	1,000.4	6.1	.....	73	6.88	e.	6.4	
12:58	1,003.7	7.0	74	e.	5.8	384	984.4	4.5	1.19	75	6.32	se.	7.0	
						500	970.5	5.7	.....	63	5.77	se.	7.9	
						750	941.5	9.1	.....	37	4.28	se.	10.0	
1:10	1,003.7	7.5	68	e.	6.7	888	925.8	9.5	−0.99	23	2.73	se.	11.1	
						1,000	913.4	8.8	.....	22	2.49	se.	10.8	
						1,250	886.0	7.2	.....	21	2.13	se.	10.1	
						1,500	859.7	5.6	.....	20	1.82	se.	9.4	
1:45	1,003.7	7.8	65	e.	5.8	1,552	854.1	5.3	0.63	20	1.78	se.	9.3	
						1,750	833.8	3.8	.....	20	1.60	sse.	9.7	
						2,000	808.2	2.0	.....	20	1.41	s.	10.2	
						2,250	783.4	0.1	.....	20	1.23	ssw.	10.7	
2:50	1,003.7	8.2	63	e.	3.6	2,308	769.1	−1.0	0.75	20	1.12	ssw.	11.0	
						2,500	759.2	−1.6	.....	20	1.07	ssw.	11.1	
						2,750	736.0	−3.1	.....	20	0.94	ssw.	11.3	
						3,000	713.5	−4.6	.....	19	0.79	ssw.	11.5	5/10 Cl.Cu., w.; 2/10 Cl.St., w.
						3,250	691.5	−6.1	.....	19	0.69	ssw.	11.7	
						3,500	669.8	−7.6	.....	19	0.61	ssw.	11.9	
3:45	1,003.7	6.4	70	e.	4.0	3,552	665.2	−7.9	0.74	19	0.59	ssw.	11.9	
						3,500	669.8	−7.4	.....	19	0.62	ssw.	11.8	
						3,250	691.5	−5.2	.....	18	0.71	ssw.	11.2	
						3,000	714.0	−3.0	.....	17	0.81	ssw.	10.7	
4:33	1,003.7	5.7	72	e.	4.5	2,824	730.3	−1.4	0.62	17	0.92	ssw.	10.3	
						2,750	736.8	−0.9	.....	17	0.93	ssw.	10.4	
						2,500	760.0	0.6	.....	18	1.15	ssw.	10.6	
						2,250	784.0	2.1	.....	18	1.28	ssw.	10.8	
						2,000	809.0	3.7	.....	19	1.51	ssw.	11.1	
4:50	1,003.7	5.4	72	e.	4.9	1,964	812.7	3.9	0.72	19	1.54	ssw.	11.1	
						1,750	833.9	5.4	.....	18	1.61	ssw.	11.6	
						1,500	859.7	7.3	.....	17	1.74	s.	12.2	
5:05	1,003.7	5.6	72	e.	6.3	1,398	870.8	8.0	0.29	17	1.82	s.	12.4	
						1,250	886.0	8.4	.....	17	1.87	s.	11.5	
						1,000	913.4	9.2	.....	16	1.86	sse.	10.0	
5:14	1,003.6	5.6	74	e.	5.8	747	941.9	9.9	−0.84	15	1.83	sse.	8.4	
						500	970.5	7.8	.....	44	4.66	se.	7.4	
						250	1,000.4	5.7	.....	74	6.78	e.	6.4	
5:25	1,003.6	5.5	77	e.	6.3	225	1,003.6	5.5	.....	77	6.93	e.	6.3	5/10 A.St., w.
December 18, 1918, series (No. 3).														
P. M.														
6:02	1,003.4	5.3	79	e.	6.7	225	1,003.4	5.3	.....	79	7.04	e.	6.7	5/10 A.St., w.
						250	1,000.2	5.8	.....	74	6.82	e.	7.9	
6:07	1,003.4	5.2	80	e.	6.3	457	975.5	10.2	−0.21	30	3.74	sse.	18.0	
						500	970.4	10.0	.....	28	3.44	sse.	17.9	
						750	941.5	8.8	.....	16	1.81	sse.	17.2	
						1,000	913.7	7.6	.....	4	0.42	s.	16.6	
6:22	1,003.5	5.2	80	se.	6.3	1,073	905.5	7.3	0.47	1	0.10	s.	16.4	
						1,250	888.2	6.5	.....	1	0.10	s.	15.0	
						1,500	859.5	5.3	.....	1	0.09	s.	12.9	
						1,750	834.0	4.2	.....	1	0.08	s.	11.2	
6:47	1,003.6	4.8	80	se.	5.4	1,883	820.2	3.6	0.46	1	0.08	s.	10.2	
						2,000	808.6	2.9	.....	1	0.08	s.	11.0	
						2,250	783.9	1.5	.....	1	0.07	ssw.	12.8	
						2,500	759.9	0.1	.....	1	0.06	ssw.	14.5	
7:09	1,003.7	4.9	82	se.	7.2	2,598	750.6	−0.5	0.57	1	0.06	ssw.	15.2	
						2,750	736.2	−1.5	.....	1	0.05	ssw.	15.0	
						3,000	713.4	−3.0	.....	1	0.05	ssw.	14.6	3/10 Cl.St., w.; 6/10 A.St., w.
						3,250	691.2	−4.5	.....	1	0.04	ssw.	14.3	
8:10	1,003.4	4.8	80	se.	5.4	3,441	674.8	−5.7	0.60	1	0.04	ssw.	10.0	
						3,250	691.2	−4.6	.....	1	0.04	ssw.	14.7	
						3,000	713.4	−3.1	.....	1	0.05	ssw.	15.6	
8:33	1,003.4	4.4	81	se.	4.5	2,794	732.3	−1.9	0.69	1	0.05	ssw.	16.3	
						2,750	736.2	−1.6	.....	1	0.05	ssw.	16.0	
						2,500	759.9	0.1	.....	1	0.06	ssw.	14.3	
						2,250	783.9	1.8	.....	1	0.07	ssw.	12.6	
8:47	1,003.4	4.3	80	se.	5.4	2,072	801.3	3.1	0.59	1	0.08	ssw.	11.3	
						2,000	808.6	3.5	.....	1	0.08	ssw.	11.4	
						1,750	834.0	5.0	.....	1	0.09	s.	11.8	
						1,500	859.5	6.5	.....	1	0.10	s.	12.2	
9:02	1,003.4	4.2	82	se.	4.9	1,477	861.8	6.6	0.44	1	0.10	s.	12.2	
						1,250	886.2	7.6	.....	1	0.10	s.	13.0	
						1,000	913.7	8.7	.....	1	0.11	s.	13.9	
						750	941.5	9.8	.....	1	0.12	s.	14.8	
9:12	1,003.4	4.0	85	se.	3.1	680	949.2	10.1	−1.45	1	0.12	s.	15.1	
						500	970.4	7.5	.....	34	3.53	sse.	10.7	
						250	1,000.2	3.9	.....	79	6.38	se.	4.6	
9:24	1,003.4	3.5	84	se.	4.0	225	1,003.4	3.5	.....	84	6.59	se.	4.0	5/10 Cl.St., w.; 4/10 A.St., w.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 18 and 19, 1918, series (No. 4).

Surface.						At different heights above sea.								
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C*		%	*mb.*		*m. p. s.*	
10:27	1,003.4	2.8	87	se.	4.0	225	1,003.4	2.8	.....	87	6.50	se.	4.0	5/10 Cl.St., w.; 4/10 A St., w.
						250	1,000.0	3.3	.....	80	6.19	se.	4.9	
						500	970.0	8.6	.....	13	1.45	s.	14.1	
10:37	1,003.4	3.0	84	se.	4.0	513	968.6	8.9	−2.12	9	1.03	s.	14.5	
						750	940.8	8.4	.....	6	0.66	s.	15.3	
						1,000	912.7	7.8	.....	3	0.32	s.	16.0	
10:51	1,003.4	2.9	84	se.	3.1	1,147	896.9	7.5	0.22	1	0.10	s.	16.5	
						1,250	885.5	6.9	.....	1	0.10	s.	16.4	
						1,500	858.9	5.4	.....	1	0.09	s.	16.0	
						1,750	832.9	4.0	.....	1	0.08	ssw.	15.7	
11:54	1,003.4	2.6	87	sw.	4.5	1,915	816.4	3.1	0.58	1	0.08	ssw.	15.5	
						2,000	807.7	2.6	.....	1	0.07	ssw.	15.0	
						2,250	783.0	1.1	.....	1	0.06	ssw.	13.4	
11:37	1,003.4	2.5	88	sse.	4.5	2,401	768.5	0.2	0.60	1	0.06	ssw.	12.5	
						2,500	759.0	−0.5	.....	1	0.06	ssw.	12.7	
						2,750	735.8	−2.1	.....	1	0.05	ssw.	13.3	
						3,000	712.8	−3.8	.....	1	0.04	ssw.	13.9	2/10 Cl., w.; 3/10 A.St., w.
A. M.														
12:17	1,003.3	1.7	88	se.	4.9	3,045	708.9	−4.1	0.63	1	0.04	ssw.	14.0	
						3,000	712.8	−3.8	.....	1	0.04	ssw.	13.8	
						2,750	735.8	−2.4	.....	1	0.05	ssw.	12.9	
12:30	1,003.2	1.7	85	se.	5.8	2,571	752.2	−1.3	0.55	1	0.05	ssw.	12.2	
						2,500	759.0	−0.9	.....	1	0.06	ssw.	12.5	
						2,250	783.0	0.5	.....	1	0.06	ssw.	13.7	
						2,000	807.7	1.8	.....	1	0.07	ssw.	14.8	
12:45	1,003.1	1.4	87	se.	6.3	1,915	816.4	2.3	0.67	1	0.07	ssw.	15.2	
						1,750	832.9	3.4	.....	1	0.08	ssw.	14.6	
						1,500	858.9	5.1	.....	1	0.09	s.	13.8	
						1,250	885.5	6.8	.....	1	0.10	s.	12.8	
12:57	1,003.0	1.6	83	ese.	5.8	1,125	899.1	7.6	0.18	1	0.10	s.	12.4	
						1,000	912.7	7.8	.....	2	0.21	s.	12.3	
						750	940.8	8.3	.....	3	0.33	s.	12.2	
						500	970.0	8.7	.....	5	0.56	s.	12.1	
1:18	1,003.1	1.6	83	ese.	6.7	356	987.1	9.0	−5.65	6	0.69	s.	12.0	
						250	1,000.0	3.0	.....	68	5.15	se.	5.2	
1:22	1,003.1	1.6	83	ese.	3.6	225	1,003.1	1.6	.....	83	5.69	ese.	3.6	2/10 Cl.Cu., w.; 3/10 Cl.St., w.

December 19, 1918, series (No. 5).

A. M.														
2:16	1,003.4	1.8	83	ese.	3.1	225	1,003.4	1.8	.....	83	5.78	ese.	3.1	2/10 Cl.Cu., sw.; 3/10 Cl.St., sw.
						250	1,000.5	2.6	.....	78	5.75	ese.	3.8	
2:17	1,003.4	1.8	83	ese.	3.1	504	969.8	10.3	−3.04	31	3.88	ese.	11.2	
						750	941.2	10.0	.....	22	2.70	ese.	10.3	
						1,000	913.3	9.7	.....	13	1.56	s.	9.3	
3:15	1,003.5	1.4	83	ese.	1.8	1,134	898.7	9.6	0.11	8	0.96	ssw.	8.8	
						1,250	886.2	9.0	.....	7	0.80	ssw.	9.1	
						1,500	860.0	7.5	.....	4	0.41	ssw.	9.8	
3:34	1,003.6	1.2	82	se.	2.2	1,745	834.7	6.1	0.57	1	0.09	ssw.	10.4	
						2,000	809.0	4.4	.....	1	0.08	ssw.	10.7	
						2,250	784.6	2.7	.....	1	0.07	sw.	11.0	
3:52	1,003.7	1.3	82	se.	3.6	2,296	780.0	2.4	0.67	1	0.07	sw.	11.0	
						2,500	760.7	1.1	.....	1	0.07	sw.	11.2	
						2,750	737.4	0.5	.....	1	0.06	sw.	11.5	
						3,000	714.5	−2.1	.....	1	0.05	sw.	11.7	
4:28	1,003.7	0.9	83	ese.	3.1	*3,175	698.7	−3.2	0.64	1	0.05	sw.	11.9	2/10 Cl., sw.

December 19, 1918, series (No. 6).

A. M.														
7:20	1,003.4	0.2	92	se.	4.0	225	1,003.4	0.2	.....	92	5.70	se.	4.0	3/10 Cl., sw.
						250	1,000.5	3.3	.....	67	5.19	se.	4.5	
7:23	1,003.4	0.2	92	se.	4.0	291	995.2	8.5	−1.24	25	2.78	sse.	5.2	
						500	970.8	7.8	.....	18	1.90	s.	4.2	
8:13	1,003.5	1.7	72	se.	4.5	745	942.1	9.9	−0.31	10	1.22	ssw.	3.0	
						1,000	914.3	11.4	.....	6	0.81	ssw.	4.4	
8:48	1,003.6	3.7	70	se.	4.5	1,011	912.8	11.5	−0.60	6	0.81	ssw.	4.4	
						1,250	887.0	8.2	.....	5	0.54	s.	3.6	
9:33	1,003.7	5.4	68	se.	5.4	1,348	876.3	6.8	0.93	5	0.49	s.	3.3	
						1,250	887.0	7.3	.....	6	0.61	s.	3.5	
						1,000	914.3	8.4	.....	7	0.77	sse.	3.9	
9:53	1,003.7	5.8	68	se.	3.6	900	925.1	8.9	0.22	8	0.91	sse.	4.1	
						750	942.0	9.2	.....	11	1.28	sse.	3.8	
						500	970.8	9.8	.....	15	1.82	sse.	3.4	
10:03	1,003.7	6.5	66	se.	3.6	442	977.7	9.9	−1.52	16	1.95	sse.	3.3	
						250	1,000.5	7.0	.....	58	5.81	se.	3.6	
10:06	1,003.6	6.6	64	se.	3.6	225	1,003.6	6.6	.....	64	6.24	se.	3.6	1/10 Cl., sw.

* Pressure pen failed to record.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 27, 1918.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	
8:22	987.5	−4.3	94	sse.	6.3	225	987.5	−4.3	.....	94	4.60	sse.	6.3	10/10 St., sw.
						250	984.2	−4.4	.....	93	3.92	sse.	.....	Snow (dry) began during night (a. m.) and continued during flight.
						500	953.3	−5.7	.....	88	3.33	s.	.....	
						750	923.8	−7.0	.....	82	2.77	ssw.	.....	Altitude of St. base about 650 m.
						1,000	894.7	−8.3	.....	75	2.30	wsw.	.....	
9:38	987.5	−3.6	93	sse.	6.7	1,031	891.0	−8.5	0.60	75	2.22	wsw.	(*)	
						1,000	894.7	−8.3	.....	75	2.27	wsw.	.....	
						750	923.8	−6.5	.....	79	2.79	ssw.	.....	
						500	953.3	−4.8	.....	84	3.43	s.	.....	
						250	984.2	−3.2	.....	89	4.17	sse.	.....	
10:17	987.5	−3.0	89	sse.	7.6	225	987.5	−2.0	.....	89	4.23	sse.	7.6	Overcast.

December 28, 1918.

P. M.														
1:37	988.1	−5.0	81	w.	5.8	225	988.1	− 5.0	.....	81	3.25	w.	5.8	10/10 St., w.
						250	985.0	− 5.1	.....	80	3.18	w.	6.2	Snow (dry) began 1:00 p. m., and continued throughout flight.
						500	954.2	− 6.2	.....	71	2.57	wnw.	10.4	
1:50	988.1	−4.8	81	w.	5.4	647	936.2	− 6.9	0.45	65	2.22	wnw.	12.8	
						750	924.0	− 7.4	.....	70	2.28	wnw.	11.7	Altitude of St. base about 1,000 m.
						1,000	894.6	− 8.7	.....	83	2.42	wnw.	9.1	
2:23	988.3	−4.6	81	w.	5.4	1,167	875.9	− 9.5	0.50	92	2.49	wnw.	7.4	
						1,250	866.3	− 9.9	.....	91	2.38	wnw.	7.1	
						1,500	838.7	−11.3	.....	85	1.99	wnw.	5.8	
2:47	988.4	−4.5	82	w.	5.8	1,695	817.6	−12.3	0.46	83	1.75	wnw.	4.9	
						1,500	838.7	−11.5	.....	84	1.91	wnw.	5.5	
						1,250	866.3	−10.6	.....	84	2.07	wnw.	6.3	
						1,000	894.6	− 9.6	.....	85	2.29	wnw.	7.1	
						750	924.0	− 8.6	.....	86	2.53	wnw.	7.9	
3:20	988.4	−4.7	81	wnw.	6.7	593	943.0	− 8.0	0.57	86	2.67	wnw.	8.4	
						500	954.2	− 7.2	.....	84	2.79	wnw.	8.1	
						250	985.0	− 5.0	.....	79	3.17	wnw.	7.9	
3:27	988.3	−4.8	78	wnw.	7.2	225	988.3	− 4.8	.....	78	3.18	wnw.	7.2	10/10 St., w.

December 29, 1918.

A. M.														
7:50	988.4	−5.4	86	sw.	4.5	225	988.4	− 5.4	.....	86	3.34	sw.	4.5	10/10 St., sw.
						250	985.0	− 5.7	.....	87	3.29	sw.	5.0	
						500	954.0	− 8.4	.....	97	2.90	sw.	10.2	
7:57	988.5	−5.5	88	sw.	4.9	567	946.0	− 9.1	1.08	100	2.81	sw.	11.6	Altitude of St. base about 600 m.
						750	924.0	− 9.5	.....	94	2.55	sw.	9.7	
						1,000	894.8	−10.2	.....	86	2.19	sw.	7.2	
8:51	988.8	−5.8	87	sw.	5.4	1,015	893.0	−10.2	0.25	86	2.19	sw.	7.0	
						1,250	866.1	− 6.9	.....	55	1.88	wsw.	11.4	
9:03	988.8	−5.7	86	sw.	4.0	1,376	852.4	− 5.2	−1.38	38	1.50	w.	13.7	
						1,500	838.7	− 5.8	.....	37	1.39	w.	14.2	
						1,750	811.8	− 6.9	.....	34	1.16	w.	15.2	
						2,000	786.5	− 8.0	.....	32	0.99	wnw.	16.2	
9:13	989.0	−5.7	85	sw.	1.8	2,216	765.6	− 9.0	0.45	30	0.85	wnw.	17.0	
						2,250	762.1	− 9.0	.....	30	0.85	wnw.	17.4	
						2,500	738.7	− 9.1	.....	29	0.81	wnw.	20.3	
9:28	989.3	−5.6	87	sw.	3.6	2,573	731.6	− 9.1	0.07	29	0.81	wnw.	21.1	
						2,500	739.0	− 9.0	.....	29	0.82	wnw.	19.9	
						2,250	763.9	− 8.7	.....	27	0.79	wnw.	15.9	
						2,000	788.9	− 8.4	.....	26	0.78	wnw.	11.8	
9:45	989.6	−5.3	85	sw.	3.6	1,980	790.7	− 8.4	0.71	26	0.78	wnw.	11.5	
						1,750	814.2	− 6.8	.....	26	0.89	wnw.	11.3	
						1,500	840.8	− 5.0	.....	27	1.08	w.	11.0	
9:55	989.7	−5.1	84	sw.	3.1	1,462	844.9	− 4.7	0.07	27	1.11	w.	11.0	
						1,250	868.0	− 4.6	.....	29	1.20	w.	9.4	
						1,000	896.1	− 4.4	.....	32	1.35	w.	7.6	
10:53	989.8	−4.4	84	sw.	3.1	892	908.7	− 4.3	−3.51	33	1.41	w.	6.8	
10:55	989.8	−4.4	84	sw.	3.1	758	924.4	− 9.0	0.88	35	0.99	w.	6.8	
						750	925.3	− 8.9	.....	35	1.03	w.	6.7	
						500	955.4	− 6.7	.....	59	2.05	wsw.	5.0	
						250	986.7	− 4.5	.....	82	3.44	sw.	3.3	
10:57	989.8	−4.3	84	sw.	3.1	225	989.8	− 4.3	.....	84	3.58	sw.	3.1	10/10 St., sw.

December 30, 1918.

A. M.														
8:28	991.3	−5.2	95	e.	6.3	225	991.3	− 5.2	.....	95	3.74	e.	6.3	4/10 St., sw.
						250	987.8	− 4.8	.....	93	3.79	e.	6.9	
						500	957.5	− 1.2	.....	70	2.87	ese.	12.5	
8:31	991.4	−5.1	95	ese.	6.3	545	952.2	0.6	−1.44	66	4.21	ese.	14.2	
						750	928.0	1.6	.....	57	3.91	ese.	13.9	
						1,000	900.4	2.8	.....	45	3.36	s.	13.6	
						1,250	873.2	4.0	.....	33	2.68	sw.	13.2	
8:50	991.4	−4.3	91	se.	5.4	1,271	870.4	4.1	−0.48	32	2.62	sw.	13.2	
						1,500	846.2	3.0	.....	32	2.43	sw.	13.2	
						1,750	820.0	1.8	.....	29	2.02	sw.	13.1	
9:12	991.5	−3.4	87	se.	2.2	1,977	797.6	− 0.7	0.48	28	1.61	sw.	13.0	
						2,000	795.0	− 0.9	.....	28	1.59	sw.	13.2	
						2,250	770.5	− 2.8	.....	32	1.55	sw.	15.6	
						2,500	746.8	− 4.8	.....	36	1.47	sw.	18.0	
						2,750	723.6	− 6.8	.....	40	1.38	sw.	20.3	

* Clock cylinder loose; record of no value.

TABLE 20.—*Free-air data from kite flights at Royal Center Aerological Station, December, 1918*—Continued.

December 30, 1918—Continued.

Surface.						At different heights above sea.								Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		
				Dir.	Vel.					Rel.	Vap. pres. Vap.	Dir.	Vel.	
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	
9:30	991.5	−2.5	87	se.	4.5	2,820	717.0	− 7.3	0.78	41	1.35	sw.	21.0	
						3,000	700.8	− 8.3		56	1.69	sw.	20.7	
						3,250	678.0	− 9.8		77	2.03	wsw.	20.4	
						3,500	656.4	−11.3		99	2.29	wsw.	20.0	Altitude of A.Cu. base about 3,400 m.
9:55	991.5	−2.0	83	se.	4.5	3,511	655.6	−11.3	0.54	100	2.31	wsw.	20.0	
						3,500	656.4	−11.2		99	2.31	wsw.	20.0	
						3,250	678.0	−10.0		84	2.18	wsw.	21.2	
						3,000	700.2	− 8.7		68	1.98	wsw.	22.3	
						2,750	722.9	− 7.3		52	1.71	wsw.	23.4	
10:28	991.0	−0.3	81	ese.	4.5	2,721	725.1	− 7.3	0.55	50	1.64	wsw.	23.5	
						2,500	745.8	− 6.1		47	1.72	wsw.	21.3	9/10 A.Cu., sw.
11:00	990.5	0.9	78	ese.	4.5	2,246	770.3	− 4.7	0.75	44	1.81	sw.	18.8	
						2,000	794.4	− 2.9		40	1.92	sw.	17.5	
						1,750	820.0	− 1.0		36	2.02	ssw.	16.2	
						1,500	846.0	1.3		32	2.15	ssw.	14.8	
11:24	990.1	1.2	76	se.	3.6	1,340	862.7	2.1	0.21	30	2.13	ssw.	14.0	
						1,250	872.7	2.3		32	2.31	ssw.	13.7	
						1,000	899.5	2.8		37	2.62	ssw.	12.8	
						750	927.3	3.4		43	3.35	ssw.	11.9	
11:37	989.9	1.8	71	se.	4.0	735	929.4	3.4	−0.27	43	3.35	ssw.	11.8	
						500	956.7	2.8		55	4.11	s.	8.6	
						250	986.7	2.1		67	4.76	se.	5.2	
11:44	989.8	2.0	68	se.	4.9	225	989.8	2.0		68	4.80	se.	4.9	10/10 St., sw.

December 31, 1918.

A. M.														
8:34	987.1	2.1	98	w.	4.5	225	987.1	2.1		98	6.97	w.	4.5	10/10 St., w.
						250	984.2	2.0		97	6.85	w.	4.9	Altitude of St. base about 450 m.
						500	953.9	1.1		92	6.09	w.	8.9	
8:35	987.1	2.1	98	w.	4.5	533	950.1	1.0	0.36	91	5.98	w.	9.4	
						750	924.8	−0.2		92	5.53	w.		
						1,000	896.6	−1.5		93	5.01	w.		
9:17	987.2	2.0	96	w.	2.2	1,254	868.2	−2.9	0.60	94	4.51	w.		
						1,000	896.6	−1.2		94	5.20	w.		
9:37	987.3	2.0	96	nw.	3.1	769	922.8	0.3	0.31	94	5.87	w.		
						750	924.8	0.4		94	5.91	w.		
						500	953.9	1.1		95	6.29	wnw.		
						250	984.2	1.9		96	6.73	nw.		
9:42	987.4	2.0	96	nw.	1.3	225	987.4	2.0		96	6.78	nw.	1.3	10/10 St., w.